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Department of Transportation
Urban Mass Transportation Administration

National Ridesharing Demonstration Program: "Maxi-Taxi" Services in the Tidewater Region of Virginia

UMTA/TSC Evaluation Series — Final Report
July 1985

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16. Abstract

In November 1980, the Tidewater Regional Transit Authority (TRT) implemented a series of shared-ride taxi services under the program name "Maxi-Taxi" (name which was subsequently changed to Maxi-Ride to avert legal challenges). These services, supplied through competitive contract with private taxi operators, were initiated as cost-saving measures. The program was funded by demonstration grants received from the U.S. Department of Transportation, under the National Ridesharing Demonstration Program, and the State of Virginia.

Maxi-Taxi services were used to expand public transportation service in low-density areas and also to replace various unproductive fixed-route bus operations. TRT also experimented successfully with various jitney-type operations. Considerable experience with costs, performance, demand, contracting procedures and management was gained through the demonstration. TRT's retention of many of the experimental services after the demonstration's conclusion in December 1981 and continued exploration of similar services is evidence of their belief that the Maxi-Taxi is a viable service concept.

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PREFACE

This report was prepared by COMSIS Corporation under contract to the Transportation Systems Center (TSC) of the U.S. Department of Transportation. The project, which concluded as a demonstration in December 1981, was funded by the Office of the Secretary of Transportation, the Federal Highway Administration, and the Urban Mass Transportation Administration under the National Ridesharing Demonstration Program. Responsibility for evaluation of the project rests with TSC's Office of Systems Assessment. The author of the report is J. Richard Kuzmyak of COMSIS.

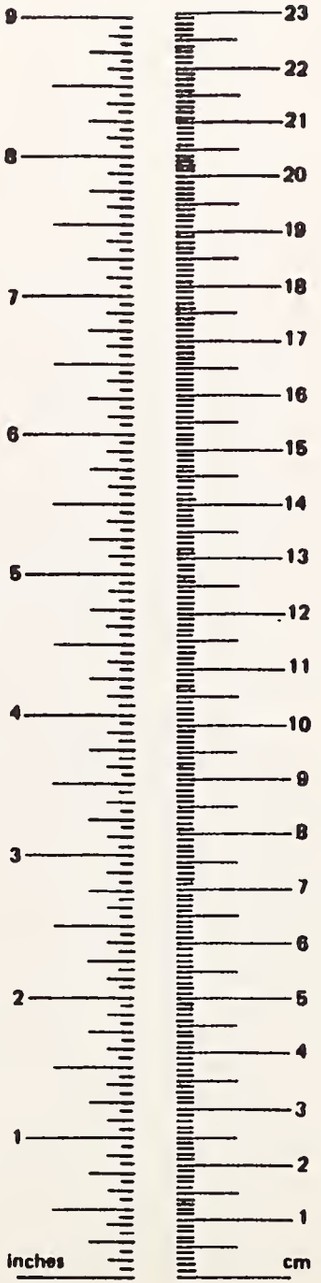
Extensive assistance in preparation of this report was received from the Tidewater Regional Transit Authority, the project grant recipient. A. Jeff Becker, the project manager, served as a regular source of information, and it was with his assistance that we were able to understand the key issues and inner workings of the project. Material from TRT's own final project report and various internal memoranda supplied much of the content for this report. Thanks is also offered to Joel Freilich, the TSC evaluation manager, for his assistance in review of the report and interpretation of the findings.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

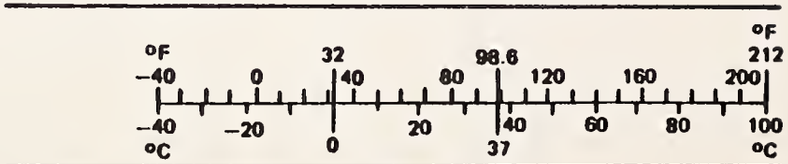
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.96	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in. = 2.54 cm (exactly). For other exact conversions and more detail tables see NBS Misc. Publ. 286, Units of Weight and Measures. Price $2.25 SD Catalog No. C13 10 286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	36	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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EXECUTIVE SUMMARY

This is a report on a project based in Tidewater, Virginia which demonstrated the application of shared-ride taxi as a supplement or replacement to conventional public transit in a regional transportation network. The project, initiated under the name Maxi-Taxi and subsequently renamed Maxi-Ride, for legal reasons, operated as a demonstration from November 1980 through December 1981, under funding from the U.S. Department of Transportation's National Ridesharing Demonstration Program and the Virginia Department of Highways and Transportation. The grant recipient, as well as the planning and implementing agency for the project, was the Tidewater Regional Transit Authority (TRT). Major elements of the program have been sustained by TRT following the conclusion of the demonstration.

TRT initiated the shared-ride concept largely as a cost-cutting measure, to help curb a growing operating deficit and to make available a more cost-effective means to maintain or expand service in accordance with its regional service mandate. A variety of shared-ride taxi applications were tested under the Maxi-Taxi program. These included: new services in low-density markets; feeder service to fixed-route bus; selective time-of-day or total replacement for fixed-route bus; activity center (downtown) shuttle service; and medium-density corridor jitney service. Considerable experience in costs, performance, demand, contracting procedures and management was gained through the demonstration.

The Maxi-Taxi program contracted with individual private taxi operators to provide service within specified markets and according to a detailed service plan. The service plans, which covered schedules, routes, hours, fares, and even type of vehicle to be used, were drawn up by TRT and placed out on bid to local taxi operators. Service contracts were awarded to the operator offering the lowest cost per service hour. The selected operator then provided the service specified under the contract, including dispatching, using vans leased from TRT. Each month, TRT

collected the revenues from the Maxi-Taxi fareboxes and, subsequently, reimbursed the operator for the number of service hours provided at the agreed-upon cost per hour. The cost per hour reimbursement included the contractor's vehicle leasing expense. Under the service arrangement, TRT also packaged and marketed the service, and retained sole authority to effect service changes.

No special planning methods were developed in conjunction with the Maxi-Taxi program. Rather, services were established in areas where TRT perceived the greatest need, and were subsequently monitored and modified based on operating experience. Eleven Maxi-Taxi services were in operation as of November 1980, including two services which had been operating for several months as pilots. Based on productivity and cost recovery criteria, service areas were redefined, fares raised, vehicle fleets increased or decreased, and operating hours revised. By June 1981, all Maxi-Taxi services funded under the Federal grant had been terminated. The reason for this was that the Federal funds could be applied only to tests which did not replace existing public transit operations or otherwise violate the labor protections specified under Section 13(c) of the Urban Mass Transportation Act. The Federal demonstration funds were used for new services in low density urban or rural areas; the services were poorly patronized, covered only a small fraction of their costs, and exhausted resources quickly. The services implemented under State funding were not similarly restricted; this was the basis for the feeder and jitney services which replaced existing bus operations. The jitney services were particularly effective, as discussed below.

Most Maxi-Taxi services, except for the jitney installations, consist of one- to-three vehicle systems which operate as a combination demand-responsive and scheduled-route service within a specified service area. Vehicles used to provide the service were 12 to 15 passenger vans. Fares range from $1.00 to $1.50, compared to a $.50 bus fare, but include a transfer privilege where applicable. The services carry about three to six passengers per hour at a cost of $13 to $15 per vehicle hour, which includes vehicle, operating, and TRT's administrative cost.

Subtracting passenger revenues, at current fare and passenger levels, this means that most services operate at a net cost (i.e., require a subsidy) of between $2 and $5 per passenger. This net cost per **per passenger** is higher than that of the previous fixed-route bus, though **total** net cost for the entire service area where replacement occurred has generally been reduced considerably. In sum, the action has allowed TRT to continue to provide service in areas where the cost had become prohibitive.

The special Jitney-Ride service which TRT implemented on its former Willoughby route has been much more successful than the typical areawide service. Jitney-Ride, which employs a minibus to provide frequent, fixed-route service, carries about 14 passengers per hour at a fare of $.50, resulting in a net cost of only $.98 per passenger.

Following the demonstration, TRT has continued its exploration of shared-ride taxi as both a service improvement and cost-saving feature. It has concentrated its post-demonstration efforts on revised contracting methods--looking to improve service quality through profit incentive--and with more jitney-type services.

While in the process of renewing its service contracts in the fall of 1982, TRT determined that it could provide Maxi-Taxi service in-house at the same or possibly even lower cost. It reached this conclusion after securing a waiver from its operators' union to hire drivers independently for paratransit services at sub-union rates--specifically $4.50 per hour with limited fringe benefits vs. $9.70 per hour with full fringe benefits for regular employees. What this meant was that TRT could furnish the service either internally or through contract at a cost of between $12 to $14 per service hour, including the cost of the vehicle in each case (approximately $2/hour). TRT's cost savings, therefore, lie in substituting Maxi-Taxi/Jitney-Ride paratransit services for conventional fixed-route services, or $14 vs. $30 per hour, and not in public vs. private paratransit operation.

TRT has used this flexibility not to eliminate the private contract services, but to provide leverage when contracting with private operators. As of February 1983, TRT was supplying the Deep Creek, Churchland and Bowers Hill Maxi-Taxi services with its own staff, while the Ocean View and Hampton Blvd. services were contracted. Likewise with the Jitney-Ride services, three of approximately eight routes now in operation are served by private contractor, while the remaining are supplied in-house.

Operation of the Jitney-Ride services has become increasingly innovative. In several cases TRT is now using paratransit minibuses in mixed operation with regular fixed-route service on the same route, where the minibus is used for either regularly-scheduled or tripper service.

1. INTRODUCTION

The Maxi-Taxi demonstration in the Tidewater region of Virginia was an innovative test of the application of privately-contracted, shared-ride taxi services as a replacement for or supplement to conventional fixed-route transit in an integrated regional transit network. The service experiment was funded as a demonstration under the National Ridesharing Demonstration Program of the U.S. Department of Transportation (DOT), and through demonstration funding from the Virginia Department of Highways and Transportation. The formal demonstration ended in December 1981, though several of the service elements are still in operation.

The Service Assessment Division of the U.S. DOT's Transportation Systems Center (TSC) was funded by the Urban Mass Transportation Administration's Service and Methods Demonstration Program to evaluate the project. This report, prepared by COMSIS Corporation under contract to TSC, completes that evaluation.

The grant recipient and administering agency for the Maxi-Taxi demonstration was the Tidewater Regional Transit Authority (TRT). TRT is the transit operator for all public transportation service within the Tidewater Transportation District, a 1,079 square-mile area which includes the cities of Norfolk, Portsmouth, Virginia Beach, Chesapeake and Suffolk. TRT's primary activity is the operation of a 41-route bus network that interconnects this region.

TRT's efforts to provide the Tidewater District with adequate transit service have been hampered by the vast area involved, much of which is sparsely populated. Like most transit operators, TRT was also facing the problem of escalating costs and stationary or declining passenger revenue and external funding. The struggle to maintain an effective transit program despite shrinking resources led TRT to the idea of substituting less costly, privately-operated, shared-ride taxi service for unproductive conventional bus operations. TRT developed and

implemented its own test case in early 1979, involving replacement of a declining fixed-route service with an areawide van-based service provided under contract by a local taxi operator. The general success and innovative nature of the pilot test, named "Maxi-Taxi" by TRT, led to more extensive and varied testing under the formal demonstration program. Eleven different applications were tested, ranging from additional areawide replacement services for fixed-route bus, like the pilot test, to time-of-day replacement services (evenings and weekends), feeder services, jitney services, and entirely new services in low-density urban and rural areas. These applications have demonstrated varied success, and most were modified over time in response to productivity standards and budget constraints. TRT was sufficiently satisfied with the demonstration of the Maxi-Taxi concept that it has retained several of the services after demonstration funding expired, and continues to experiment with improved service models on its own.

In summary, the Tidewater application of shared-ride taxi to conventional bus replacement and enhancement represents an innovative transit management and ridesharing strategy. The lessons of the Tidewater experiment should be valuable to other operators whose management and cost problems are forcing them to consider new alternatives. This report presents the details and findings of the Maxi-Taxi demonstration in the following format:

- Chapter 2 provides a description of TRT and the project site.
- Chapter 3 discusses the planning and development of the Maxi-Taxi program.
- Chapter 4 presents a summary of program operating characteristics and the service, ridership and economic impacts.
- Chapter 5 concludes with a general summary of the findings and transferability of the Maxi-Taxi demonstration.

2. SITE DESCRIPTION

The Tidewater Transportation District is composed of five cities in southeastern Virginia: Norfolk, Portsmouth, Chesapeake, Virginia Beach, and Suffolk (see Figure 2-1).

The district covers an area of 1,079 square miles and has a population of approximately 800,000. However, about two-thirds of the area is rural. While Norfolk and Portsmouth are rather well-defined, medium-to-high density urban areas, large portions of Chesapeake and Suffolk are rural, and Virginia Beach is a low-density residential area with heavy ocean front resort development.

The principal employer in the area is the U.S. Navy, with five major installations located throughout the region (see Figure 2-2) and a total employment of approximately 75,000. There are two central business districts, Norfolk and Portsmouth. These are separated by the Elizabeth River and, therefore, do not constitute a strong single focus of employment. Total regional employment is about 300,000.[1]

The Tidewater Regional Transit Authority (TRT) is responsible for the planning, regulation and operation of all public transportation and related facilities in the service area. This includes a 41-route, 141-vehicle, fixed-route bus network and a regional ridesharing program. In fiscal year 1979, TRT's fixed-route bus service furnished 5,900,000 bus-miles and 420,000 bus-hours of service, and carried 12,700,000 passengers. The ridesharing services provided by TRT include a fleet of 100 vans for vanpooling and 50 vans for providing special services to the elderly and handicapped. TRT also assists in buspool and carpool matching.

---

[1] A.J. Becker, W. Talley, J. Krumke, P. Anderson, **Prototype Bus Service Evaluation System: Tidewater Transportation District Commission**, Urban Mass Transportation Administration, U.S. DOT, April 1981 (No. UMTA-VA-09-7001-81-1).

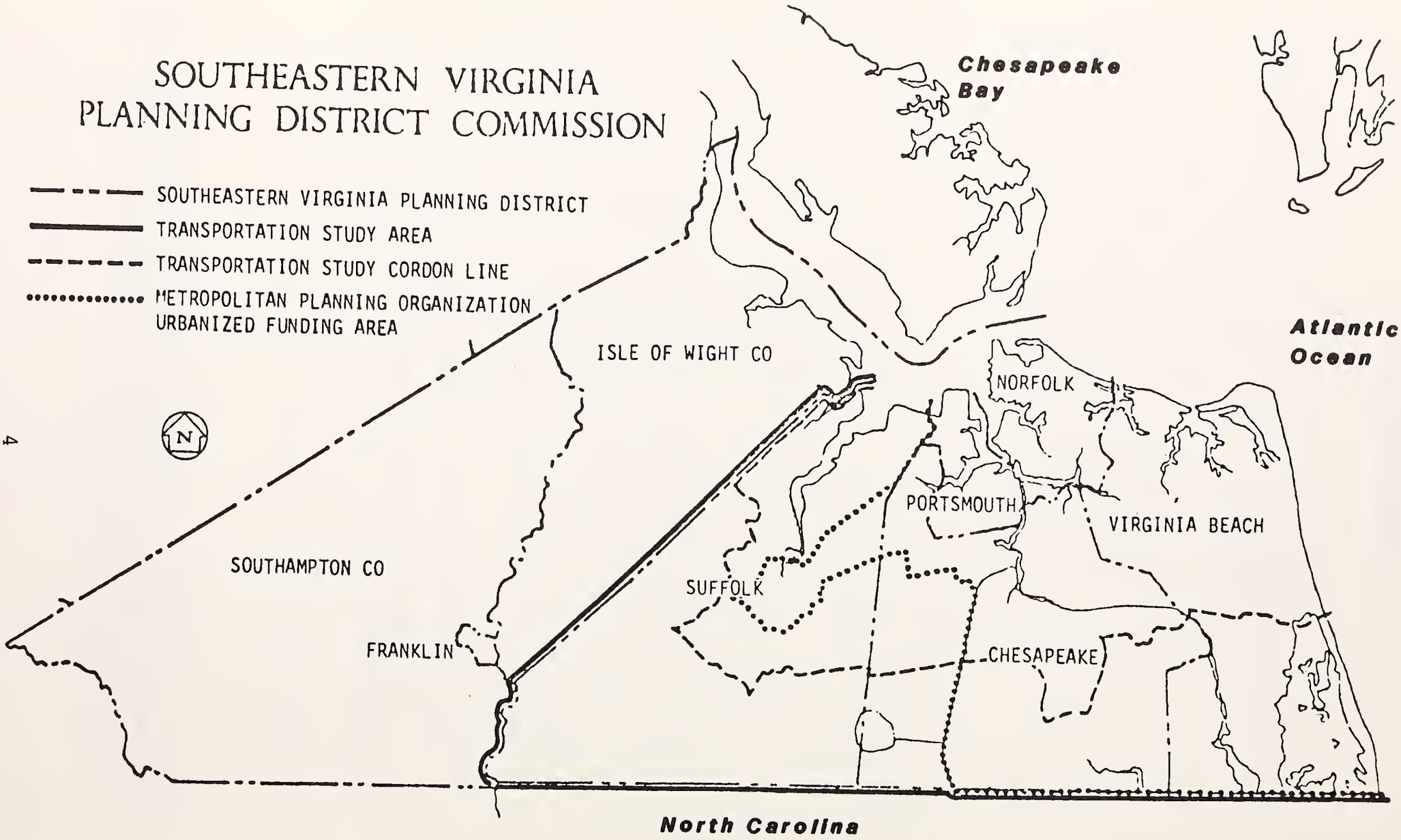


FIGURE 2-1. TIDEWATER TRANSPORTATION DISTRICT

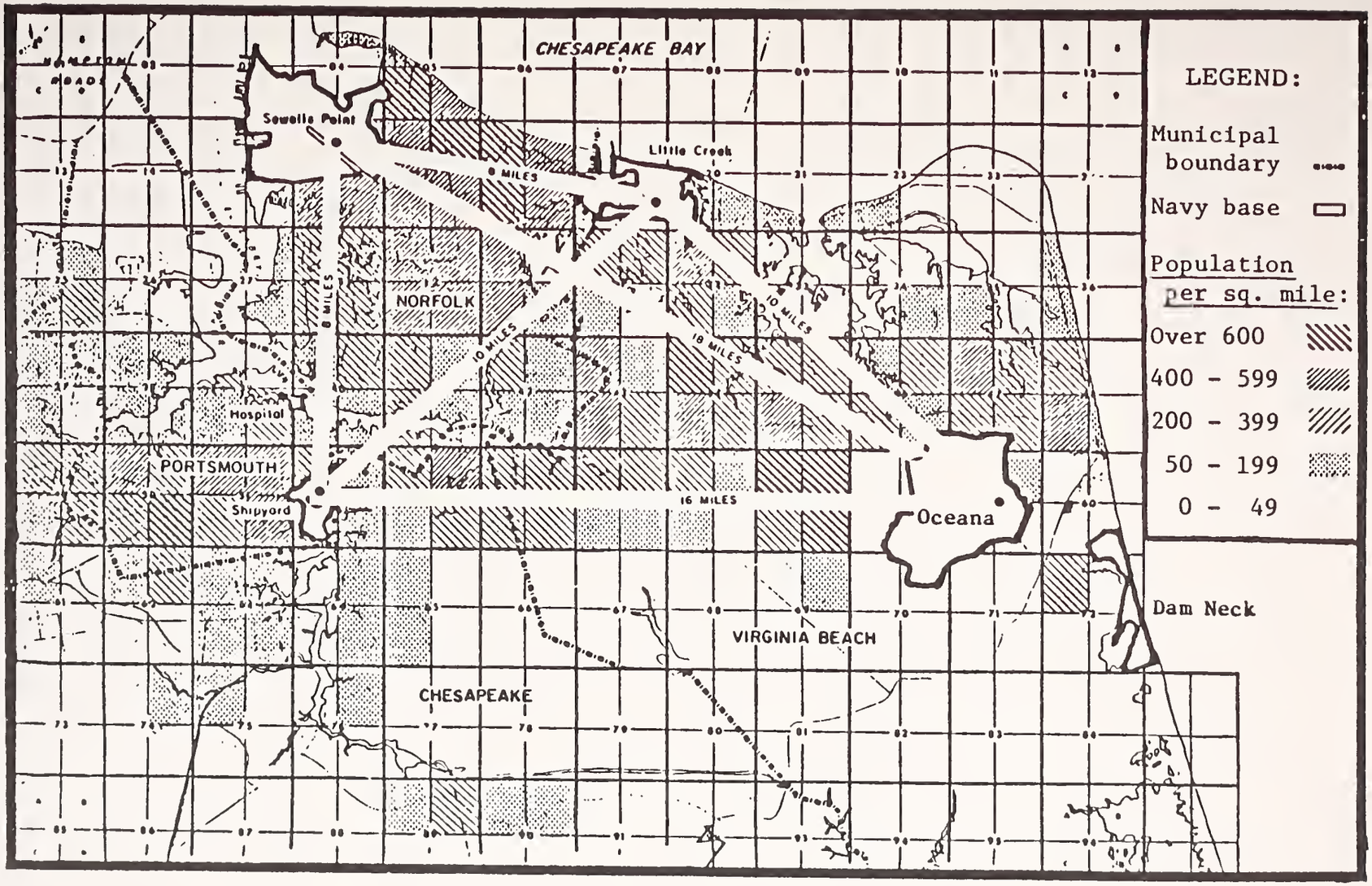


FIGURE 2-2. NAVAL FACILITIES IN TIDEWATER, VIRGINIA

3. PLANNING AND IMPLEMENTATION

3.1 BACKGROUND

The Maxi-Taxi program, which was formally implemented in November 1980, was the product of planning that began in 1977. TRT's earliest interests in Maxi-Taxi type services surfaced in conjunction with planning and service development for the community of Virginia Beach. TRT was asked to respond to the travel needs of suburban neighborhoods in Virginia Beach that were not served by public transportation. TRT felt that a form of demand-responsive transportation would be appropriate, given the low density character of these areas. Travel surveys were conducted at five major activity centers to try to determine potential market response to various "unconventional" service options. It was concluded from the results of these surveys that the ridership potential for shared-ride taxi (SRT) service would be small, even under optimal service conditions.

TRT nevertheless continued its exploration of the SRT concept, and in early 1978 issued a Request for Proposal (RFP) to determine the interest of the local taxi companies in a shared-ride taxi program. The RFP solicited input directly from the operators on the economic and service-related factors they would regard as important in deciding whether to get involved. Areas probed included fare structure (such that the service would be self-supporting), service area, requests for service, level of service, and coordination among taxi operators. Though the RFP did not result in the immediate development of service, it was an important planning step for TRT in designing its program.

TRT's first experience in tapping private taxi services through service contract occurred in early 1979, when three taxi firms were contracted to provide elderly and handicapped transportation. This arrangement was dissolved in mid-1980, when the cost became prohibitive to TRT compared to its own limited advance reservation, demand-responsive service.

In May 1979, TRT submitted a letter of interest for funding under the National Ridesharing Demonstration Program to further

its SRT program development. While Tidewater was eventually selected as a demonstration site, the funding grant was not received until November 1980. In the meantime, TRT proceeded at first independently with development of this program, and subsequently under a demonstration grant from the State of Virginia.

One of TRT's first opportunities for actual implementation of a general purpose shared-ride taxi installation occurred as a response to congestion complaints at the area's largest shopping mall, Military Circle. Both the mall's owners and city officials were concerned about improving customer access to the facility, and TRT seized the opportunity to pilot a shared-ride taxi service. Details of a service plan were subsequently worked out in cooperation with the mall merchants, for a service that would connect the mall to the adjacent subdivision of Kempsville in Virginia Beach. The plan provided benefits to two member jurisdictions (Norfolk and Virginia Beach), and allowed a single Norfolk cab company to provide the service. The service was initiated on November 15, 1979, to operate through the Christmas season. The service began with two dedicated taxi vehicles, operating Monday through Saturday from 9:30 a.m. to 10:30 p.m., at a fare of $1.00 per one-way trip. Because of poor ridership, however, one of the vehicles was removed from service on December 4, and, following a continuing decline, the service was stopped entirely on January 1, 1980. Ridership on the test service never exceeded 15 passengers per day, whereas TRT was realizing costs of $8.00 per vehicle hour under its service contract with the provider.

Another pilot test effort was somewhat more successful. This service was targeted at a rural, low density area in the Chesapeake region adjacent to the City of Portsmouth, known as Deep Creek/Gilmerton. While this area was rapidly growing, it was unable to support the two bus routes that connected it with Portsmouth. Over time, TRT gradually cut back the bus service based on cost-recovery standards, and these cutbacks produced steadily worsening ridership and cost recovery. However, there was still strong public sentiment to retain public transit service, and this caused Chesapeake city officials to ask TRT for

some type of alternative service. TRT's general solution was to supply a flexible service on an on-call basis to transport riders to a major activity center, which was also a transfer point to the regional fixed-route bus network. TRT then further decided after some economic analysis that this service would best be provided by a private taxi operator. Chesapeake officials concurred with TRT's recommendations, and the Deep Creek/Tower Mall "Maxi-Taxi" was implemented in September 1979.

The Deep Creek Maxi-Taxi was introduced as a door-to-door, many-to-one, demand-responsive type service, connecting the Deep Creek community with nearby Tower Mall. In addition to being the major regional shopping facility, Tower Mall was also located so that it could serve as an efficient transfer point to the TRT bus system. Deep Creek residents could receive service from their doorstep to the mall by calling in a reservation. The Maxi-Taxi was to provide service within one hour of the call. The pickup schedule was arranged so that arrival at the mall would coincide with TRT's fixed-route bus, for passengers desiring to transfer to other destinations in the region. The Maxi-Taxi would then also wait to pick up returning bus passengers. Users were charged $1.00 for the basic trip within the service area, which included an "all-zones" ticket for transferring to any other location in the system.

TRT negotiated a contract with Yellow Cab of Chesapeake to provide the service. Under the agreement, Yellow Cab furnished the prescribed service at a cost to TRT of $7.00 per vehicle hour. In exchange, the operator agreed to remit all fare revenues to TRT. To meet the anticipated passenger loads, TRT leased a van to the operator at a per-mile rate which fully recaptured the cost of the included vehicle and maintenance; the operator supplied his own insurance.

Despite TRT's success in securing the support of Chesapeake officials for the Maxi-Taxi, it was still necessary for TRT to apply some resourceful marketing to sell Maxi-Taxi to the general public. Public meetings were held prior to implementation, which demonstrated considerable citizen resistance to any form of service other than the existing bus. TRT met this resistance

through an image-building program, coupled with extensive information exchange. A door-to-door advertising campaign was conducted, and a special effort was made to gain the support of the merchants at Tower Mall. The marketing efforts appeared to be successful, as the resistance diminished and the public accepted and began to use the service.

3.2 PLANNING

In anticipation of demonstration funds from the National Ridesharing Demonstration Program and also demonstration funding support from the State of Virginia, TRT followed its successful Deep Creek/Tower Mall pilot with planning for the system-wide testing of shared-ride taxi. TRT planned to use these resources to experiment with a range of SRT applications. An initial list of applications which appeared interesting included:

- o substitution of SRT services for evening or weekend bus service;
- o complete replacement of fixed-route with areawide demand-response or corridor jitney service;
- o feeder service;
- o expansion of service into low density areas;
- o reinstitution of service in areas previously served by fixed-route bus.

TRT's planning for the regional Maxi-Taxi program began in the winter of 1979/80 with extensive reviews of previous experience. The information sought in these reviews included criteria for assessing demand for shared-ride taxi type services, operational characteristics and design variations, contracting methods and marketing strategies. The reviews found that most of the published planning experience was concentrated in rural transportation and special services for the elderly and handicapped, which limited its applicability. While marketing was shown to be important by most studies, techniques used were not found to differ greatly from those used in other forms of public transportation. In sum, review of existing experience does not seem to have added much to TRT's Maxi-Taxi planning effort. Without access to proven planning methods, TRT was obliged to design

services using a system which chose the best candidate areas for each basic service type (new low-density service, feeder service, replacement service, etc.), and then applied a conservative, incremental approach in service development, i.e., beginning service with only one or two vehicles and then making adjustments as operating experience was acquired. While cost and revenue analysis was performed, lack of experience caused a heavy reliance on judgment to estimate ridership response. With regard to contracting procedures and marketing, the same strategies developed for the pilot were to be extended to the demonstration services.

Early in the planning phase, complications developed that delayed TRT's Federal demonstration grant. Because some of the proposed services would replace existing publicly-operated fixed-route bus with privately-operated services, U.S. DOT reviewers concluded that the proposal could be in violation of Section 13(c). This section of the Urban Mass Transportation Act provides that no existing public transportation employee will be made worse off as a result of the receipt and use of Federal assistance. Consequently, TRT was asked to clarify how its Maxi-Taxi program would impact its existing labor force. Attempting to resolve this issue took well over a year, causing TRT to continue its planning and program development with State demonstration funds.

Between the spring and fall of 1980, TRT identified and developed ten service applications, which were approved by its Executive Board in September and scheduled for implementation in November. These services are described below and summarized in Table 3-1. The location of individual Maxi-Taxi service areas within the Tidewater region is shown in Figure 3-1. Figure 3-2 shows the linkage between the Maxi-Taxi service areas and TRT's existing fixed-route bus network.

1. Suffolk and Surrounding Areas - This service provided limited public transportation in a largely rural area. The Suffolk Maxi-Taxi was conceived as an areawide, demand-responsive service to be targeted chiefly at elderly residents who were dependent upon others for transportation to basic shopping and

TABLE 3-1. SUMMARY CHARACTERISTICS OF MAXI-TAXI SERVICES
(As Implemented on November 23, 1980)

SERVICE AREA	TYPE SERVICE	NUMBER VEHICLES	OPERATING HOURS	ONE-WAY FARE	OPERATING CHARACTERISTICS
Suffolk Rural	New Service	1	9 am-2 pm M-Sat[1]	$2.00	Four scheduled trips to downtown Suffolk; doorstep service for requests received by 3:00 pm prevous day.
Churchland	Replacement Service	2	6 am-7 pm M-Sat	$1.00**	Doorstep service to transfer point at Churchland Shopping Center within 60 minutes of call; return trips every 50 minutes.
Bowers Hill	Replacement Feeder Service	1	6 am-7 pm M-Sat	$1.00**	Doorstep service within 60 minutes of call to transfer point at Tower Mall; return trips every hour, on the hour.
Great Bridge/ Greenbrier	New Feeder Service	2	8am-5:30pm M-Sat	$1.00**	Doorstep service within 60 minutes of call to transfer point at Great Bridge Civic Center; return trips every 60 minutes.
College Park	New Service	2	8am-5:30pm M-Sat	$1.00**	Doorstep service within 60 minutes of call to transfer point at College Park Shopping Center; return trips every 60 minutes.
Portsmouth Night Service	New Night Service	4	7pm-10:00pm M-Sat	$.50*	Doorstep service within 30 minutes of call to stops at shopping centers and naval installations; return from stops every 30 minutes; transfer to other Maxi-Taxi services at Tower Mall.
Granby Mall	New Downtown Shuttle	1	11 am-2 pm M-F	Free	Automotive-powered "trolley" vehicle every 20 minutes.

TABLE 3-1 (Continued)

SERVICE AREA	TYPE SERVICE	NUMBER VEHICLES	OPERATING HOURS	ONE-WAY FARE	OPERATING CHARACTERISTICS
Hampton Blvd.	Replacement Evening Service	2	7 pm-12 am M-Sun	$.50*	Doorstep service within 30 minutes of call to transfer point at Norfolk General Hospital; return trips every 40 minutes.
Ocean View/ Bayview	Replacement Service	2	8 am-6 pm M-Sun	$.50*	Doorstep service within 60 minutes of call to several activity centers and transfer points at Ocean View station or intersection of Tidewater Drive and Little Creek Road; return trips every 60 minutes.
Coronado	Replacement Evening Service	1	9 pm-1 am M-Sun	$.50*	Fixed-route jitney; four evening trips on approximate 1-hour headways.
Deep Creek	Replacement Service & Feeder	1	6 am-7 pm M-Sat	$1.00**	Doorstep service within 60 minutes of call to transfer point at Tower Mall; return trips every 60 minutes.

*Same fare as bus: $.50 basic fare + $.05 transfer charge and $.20 per additional zone (on bus).
**Includes TRT bus all-zones ticket.

[1]On 2-day rotating basis in each of three communities.

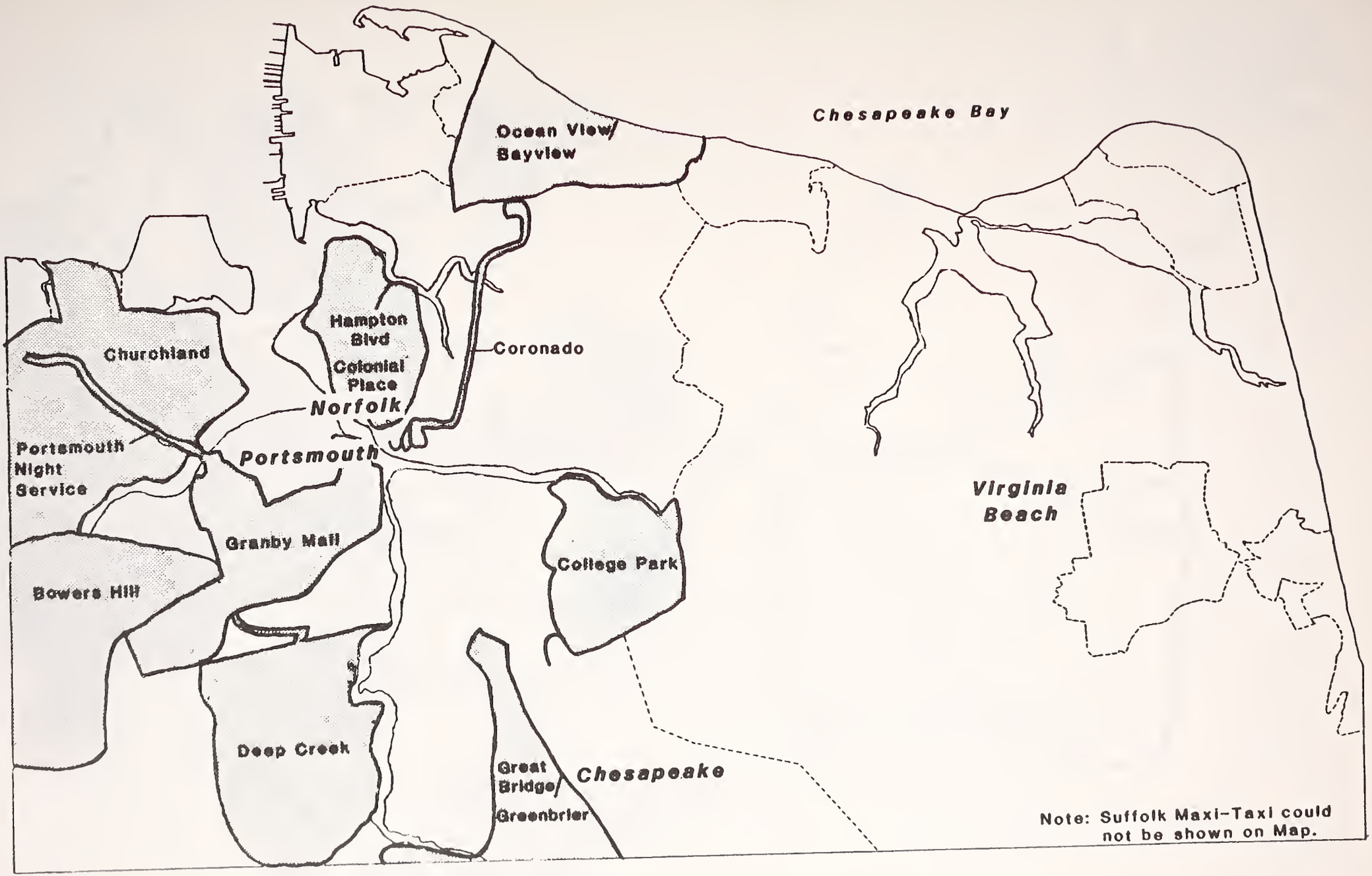


FIGURE 3-1. MAXI-TAXI SERVICE AREAS

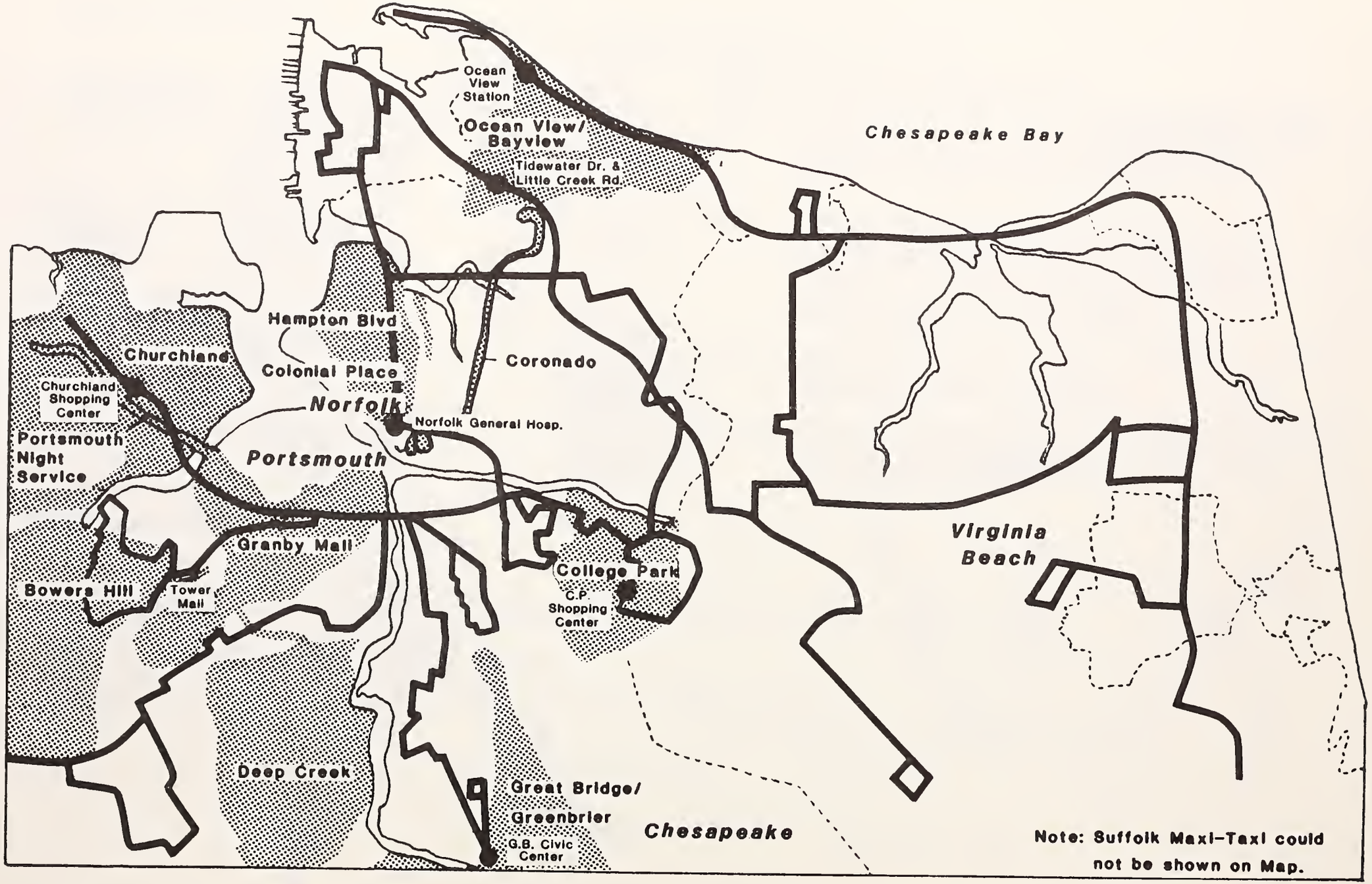


FIGURE 3-2. LINKAGE BETWEEN MAXI-TAXI AND TRT REGIONAL BUS SYSTEM

medical destinations. As implemented, however, it functioned as a combination fixed-route and demand-responsive service. Because a low volume of ridership was anticipated, service was to be provided between the hours of 9:00 a.m. and 2:00 p.m. by one van on a rotating basis among three communities: Holland (Tuesday and Friday), Whaleyville (Monday and Thursday), and Chuckatuck/ Crittenden (Wednesday and Saturday). In each community, the vehicle was to make four scheduled runs per day, beginning at 9:00 a.m., 10:00 a.m., 12:30 p.m., and 1:30 p.m., and terminating in downtown Suffolk. Customers were advised as to the intersections and times at which they could meet Maxi-Taxi for their trips. Alternatively, they could request doorstep pickup (or drop-off) for travel to or from downtown Suffolk or anywhere within their own community* by calling the Maxi-Taxi dispatcher by 3:00 p.m. on the day before the trip. Fare was set at $2.00 per one-way trip, which included an all-zones TRT bus ticket.

2. Churchland** - This area was served by three TRT bus routes: #42-West Norfolk, #47-Churchland, and #48-Pughsville. Two of these routes, #42 and #48, served areas with low population density, and realized low cost recovery (net operating cost per passenger of about $3.65). The proposed Maxi-Taxi service was to replace Routes #42 and #48 with one van operating on an areawide, demand-responsive basis (like the Deep Creek Maxi-Taxi) between 6 a.m. and 7 p.m. Monday through Saturday, transporting riders to the Churchland Shopping Center where they could transfer to the remaining Route #47. For the trip to Churchland Shopping Center, customers were to be picked up at their doors, within one hour of calling the dispatcher. Return trips from the shopping center were scheduled for every 50 minutes. Like Deep Creek, one-way fare was $1.00, which included an all-zones TRT bus ticket.

*Residents of the community receiving service on a particular day could not use the Maxi-Taxi to travel to any of the other communities because of the large trip distances involved.

**The Churchland service was actually implemented as an internal economy measure in the summer of 1980 with one vehicle. An additional vehicle was added in the November implementation.

3. Bowers Hill - This application was also a replacement service to fixed-route bus operating as a feeder. The existing bus service (Route #55) in the Bowers Hill area had a net operating cost per passenger of $1.77. The Maxi-Taxi replacement service entailed one van operating areawide between the Bowers Hill neighborhood and Tower Mall, transfer point to Routes #44, #45 and #50. Service was to be provided between 6 a.m. and 7 p.m., Monday through Saturday, at a price of $1.00, which included an all-zones TRT bus ticket. Customers would obtain service from their doors to Tower Mall or anywhere else in the service area within one hour of calling the dispatcher. For trips returning from Tower Mall, the Maxi-Taxi van would depart every hour on the hour, starting at 7 a.m.

4. Great Bridge - This area was the site of a new feeder service application for Maxi-Taxi. Great Bridge was served by TRT Route #22, and service changes were being considered to provide additional service to the area. However, extension of the fixed-route service did not appear to be justified, so TRT suggested a Maxi-Taxi service to serve as a feeder/extension to Route #22. The Maxi-Taxi was to serve all trips within the service area, including trips to and from the transfer point to Route #22 for access to destinations outside the service area. The service was to be supplied by two Maxi-Taxi vehicles providing areawide on-call service between 8 a.m. and 5:30 p.m., Monday through Saturday. Within one hour of calling, customers would obtain service from their doors to the Great Bridge Civic Center or anywhere else within the service area. Return trips from Great Bridge Civic Center were to occur approximately every 60 minutes, based on the transfer with Route #22. Fare for this service would be $1.00, inclusive of an all-zones bus ticket.

5. College Park - College Park is a low-to-medium density community in the Kempsville area of Virginia Beach. This Maxi-Taxi implementation was to be an areawide, demand-responsive service, serving all trips within the community and connecting with the TRT bus system (Route #15) at the College Park Shopping Center. The service was to operate with one van from 6 a.m. to 10 p.m., Monday through Friday, at a fare of $1.00, which would

include an all-zones bus transfer. Customers would obtain service at their doors within one hour of calling, although pickups could also be arranged in advance or on a routine basis. Return trips from College Park Shopping Center would leave every 60 minutes, timed to the arrival of Route #15.

6. Portsmouth Night Service - With the exception of one route, all evening bus service in Portsmouth had been terminated in 1975 due to poor ridership and high costs. The demonstration proposed to test whether Maxi-Taxi would be an effective strategy for reinstituting evening service. The Maxi-Taxi service was to consist of four vehicles providing areawide service between 7:00 p.m. and 10:00 p.m., Monday through Saturday. Customers could obtain service from their doors within 30 minutes of calling, or at the main stops at shopping centers and naval installations, where the Maxi-Taxi would arrive approximately every 30 minutes. Riders were advised to arrange for the return trip with the Maxi-Taxi driver before leaving the vehicle. The fare was to be the same as regular bus, $.50, plus $.05 transfer and a $.20 zone charge if the trip crossed the western branch of the Elizabeth River (roughly the midpoint of the service area).

7. Granby Mall - This new shuttle service in Norfolk linked the downtown pedestrian mall with the adjacent financial district. The service was provided by a gasoline-powered vehicle designed to look like an antique trolley. This vehicle operated on 20-minute headways along the shuttle route from 11 a.m. to 2 p.m., Monday through Friday. The service operated fare-free.

8. Hampton Blvd. - Two parallel TRT Routes, #6 and #10, had operated in the same corridor and had performed poorly at night. It was decided to replace the services with Maxi-Taxi daily between 7 p.m. and midnight. The Maxi-Taxi would consist of two vehicles providing demand-responsive service within the service area at the same fare as bus, or $.50 plus $.05 transfer and $.20 per additional zone. Within 30 minutes of calling, customers would receive doorstep service to a TRT transfer point at Norfolk General Hospital or anywhere else in the service area. Return Maxi-Taxis would leave the hospital transfer point every 40 minutes, based on connections with Route #2.

9. Ocean View/Bayview - Existing TRT Route #14 had provided very circuitous service to this community for years, and had performed very poorly. It was decided to replace Route #14 with two Maxi-Taxi vehicles, operating between 8 a.m. and 6 p.m. daily with areawide, demand-responsive service at the same fare as existing bus, or $.50, plus $.05 transfer and $.20 per additional zone. Within 60 minutes of calling, customers could obtain doorstep service to TRT bus stops at Ocean View Station and Tidewater Drive/Little Creek Road, to Southern Shopping Center, or anywhere else in the service area. Return trips from the bus stops and shopping center would leave every hour.

10. Coronado - Existing TRT Route #16 had very low ridership at night. It was decided to replace Route #16's night service with a Maxi-Taxi van operating on a fixed route between 9 p.m. and midnight. Headways were approximately one hour, with Maxi-Taxis departing at 9:45, 10:45, 11:40, and 12:30. The fare would be the same as regular bus, or $.50 plus $.05 transfer and $.20 per additional zone.

Planning for each of the Maxi-Taxi services involved analysis of potential ridership and costs, hours of service, service area boundaries, and service schedules. All proposals were reviewed by city officials, presented in public hearings in August 1980, and finally submitted to TRT's Executive Board for approval. Each of these steps resulted in refinement and modification of the proposals before implementation, which was scheduled for late November, 1980.

3.3 IMPLEMENTATION

3.3.1 Service Contracts

The Maxi-Taxi service franchises were offered under competitive bid to area taxicab companies in September 1980. Only two companies responded with bids, and both were selected in mid-October as service providers. Airport Limousine was awarded the contract for the College Park service, the only one on which it bid. Airport offered to provide the service at a rate of $13.00

per vehicle hour. Yellow Cab of Chesapeake was contracted to provide all Maxi-Taxi services except College Park at a rate of $14.00 per vehicle hour. A copy of the Request for Bids and the service contract are provided in Appendix A. In the bid document, TRT specified the areas to be served, operating hours and approximate service frequency, fares, and number of vehicles required.

As a condition of the service contract, TRT required that the service be provided with 12- or 15-passenger vans, supplemented as necessary during periods of peak demand with cabs or station wagons. So as not to exclude potential bidders with this requirement, TRT offered vehicle leasing options to all bidders. The leasing arrangements offered vehicles at a cost of $.20 per mile for 12-passenger vans, and $.24 per mile for 15-passenger vans. The lease fee included the cost of the van, maintenance and back-up, but not insurance. Lessees were required to purchase liability insurance of not less than $500,000 per person and per occurrence, naming TRT as the additional insured. Yellow Cab elected to lease the vans from TRT under the arrangement, whereas Airport Limousine already had such vehicles in its fleet.

Under the terms of the service contract, TRT agreed to pay the service operator the agreed-upon rate per hour of service furnished upon receipt of a monthly invoice. This invoice was to itemize: number of days of operation, vehicle-hours per day, total vehicle operating hours, cost per vehicle-hour, total cost, total vehicle-miles of operation, and total ridership. In return, TRT obtained all fare revenues from Maxi-Taxi operations. TRT required that all fares be collected in fareboxes and physically removed by a TRT agent.

At the close of the first year's contracts, TRT took a step toward improved operations when drawing up new contracts. New contracts as of October 1981 included a profit-sharing clause, once a minimum revenue threshold had been reached. This was an effort to see if profit incentive could be used to replicate the

normal competitive environment of the taxi operator and stimulate interest and service quality within the confines of a contract.

3.3.2 Labor and Institutional Issues

The prospect of a public transit agency paying private taxi operators to supply public transportation service produced concerned reaction from several sectors prior to implementation. These included not only organized transit labor, but the taxi operators themselves.

Initial difficulties were encountered at the grant proposal stage regarding the application of Federal demonstration funds to finance service experiments that would replace existing public transportation services with private operators. The U.S. DOT interpreted these service plans to be in violation of Section 13(c), the labor protection clause of the Urban Mass Transportation Act. As a condition of funding, TRT was obliged not to use National Ridesharing Demonstration funds for any service that would result in the elimination of bus operators' jobs. As a result, the Federal demonstration project was concentrated on initiation of service to low-density neighborhoods previously unserved by public transportation. This meant that the Suffolk, College Park, and Deep Creek services would be demonstrated under the Federal grant, while the other services would be funded by the State of Virginia.

Bus operators and mechanics of the TRT system are represented by a collective bargaining agent, Local 1177 of the Amalgamated Transit Workers Union, AFL-CIO. During the public hearings on the proposed services in August 1980, the union presented a prepared statement in opposition to the new services. A copy of the statement, which is included as Appendix B, was also sent to the State of Virginia to discourage their part in funding new services that were not in accord with Section 13(c). The union declared that the Maxi-Taxi program was in violation of the principles of the Urban Mass Transportation Act to preserve bus service in urban areas. The statement then took particular exception to three of the taxi services proposed to replace bus

operations: Downtown Norfolk's Granby Mall shuttle; the Hampton Boulevard replacement evening service; and the Ocean View/Bayview general replacement service. The union argued that these areas could not be interpreted as low density and, therefore, were not inherently unsuited for transit, as stated in TRT's proposal. The union further declared that the expenditure of State funds for Maxi-Taxi projects was equally in violation with the principles of 13(c) and, in their view, simply represented the opportunistic use of funds that had been previously committed for a completely different type of transit experiment (see pp. B-3 and B-4 of Appendix B).

The union's protest was not successful, however, and the services were implemented as planned. The burden on TRT and the State was fortunately eased by a shift in the focus of labor matters to other more significant bargaining issues. However, throughout the term of the project, the union observed the new operations very closely, and reported by word-of-mouth any difficulties, including appearance of drivers, off-route trips, cleanliness of vehicles, and possible mishandling of fares. In addition, union officials talked steadily about employee concern over job security, though no layoffs resulted from the new services.

A surprising result was the negative response of the taxi industry to the Maxi-Taxi program. TRT logically assumed that the private taxicab companies would welcome the Maxi-Taxi program as a means for improving and expanding their business. However, during the public hearings, one cab company representative spoke out against the new services as a job threat to cab drivers, asserting that the Maxi-Taxi services would attract riders who were currently using cabs, and thus result in less cab business. This concern was presented even though it was widely advertised that the new services would be provided by existing private cab companies. An owner of a large local cab company went so far as to write the State of Virginia and condemn the project as a subsidized intrusion against free enterprise (see Appendix B). The area's major cab companies not only declined to bid for the services, but during the course of the project, championed a bill through the Virginia General Assembly intended to clarify the

enabling legislation for transportation district commissions to ensure that taxicab services would not be regulated by the district commissions. In response to this action, TRT was obliged to change the name of the project services from "Maxi-Taxi" to "Maxi-Ride" to distinguish project shared-ride services from the regular taxi services.

3.3.3 Marketing

Marketing and promotional strategies accompanying Maxi-Taxi program implementation included service brochures, newspaper ads, and promotion through individual merchants.

Operating procedures for each service were incorporated into colorful brochures. A typical brochure is illustrated in Figure 3-3. The brochures were designed to give users information on the area where service could be obtained, destinations which could be reached, transfer information, operating hours, and general usage instructions, including service requests and fares. The brochure also promoted the convenience, savings and flexibility of Maxi-Taxi service.

A total of 116,000 Maxi-Taxi brochures were produced and distributed. Of these, 80,000 were distributed door-to-door to households in Maxi-Taxi service areas, while the remaining 36,000 were distributed by TRT service representatives to merchants and civic groups within the service areas. Individual merchants were also solicited to promote Maxi-Taxi to their customers.

In addition to the marketing in individual service areas, TRT also developed a general Maxi-Taxi ad, which appeared in several editions of local newspapers. This ad extolled the general benefits of using Maxi-Taxi, and encouraged readers to contact TRT for further information.

3.3.4 Service Monitoring

Following implementation, Maxi-Taxi services were monitored extensively in several ways. The principal product of the monitoring program was a monthly evaluation report, an example of

Sit Back And Relax Aboard The Maxi-Taxi

It's TRT's newest answer to ridesharing thrift and door-to-door travel convenience. MAXI-TAXI service uses reliable Tidewater cab companies to take you to certain destinations, and in many cases to connect with the TRT bus system. It's like having a personal chauffeur!

Maxi-Convenience

Within the localities served by Maxi-Taxi, you are picked up at your door. You'll avoid the strain of traffic, the cost of gasoline and all the other disadvantages of operating your own automobile.

Maxi-Savings

Because you ride with your neighbors going to or from your area, the cost of MAXI-TAXI is unbelievably low. You'll save with every ride the cost of gasoline, parking fees, car maintenance and possibly even tolls.

Maxi-Service

Use the MAXI-TAXI for a short errand, commuting to and from work, or an all-day shopping spree. Even visit your friends! Getting there and back was never easier — or more economical.

Inside this brochure are the specifics for the area on the cover. Be sure to read the information on where this service applies, the fares and operating times.

TRT Goes All Out To Bring You Good News!

The new Maxi-Taxi service is one more example of our all-out effort to make getting around Tidewater as easy and economical as possible. What's the big idea? Ridesharing.

Today, it's the only way to go. And there are so many ways to go! Take TRT buses. We've added many new buses to our fleet and we constantly review routes to make them as convenient as possible for you.

Or enroll in the Vanpool program. Our spiffy, streamlined TRT vans are helping workers get together and get to work without the aggravation and expense of do-it-yourself driving.

TRT also offers tips on how to form carpools for trips to work and shopping. For information on any of these programs, call TRT information, 623-3222, and ask for our Ridesharing booklet. It's yours free!

With today's high fuel costs and crowded highways, TRT is out to bring you good news of easier ways to go places. And on TRT, good news travels fast!

TRT

GOOD NEWS IN TOUGH TIMES.

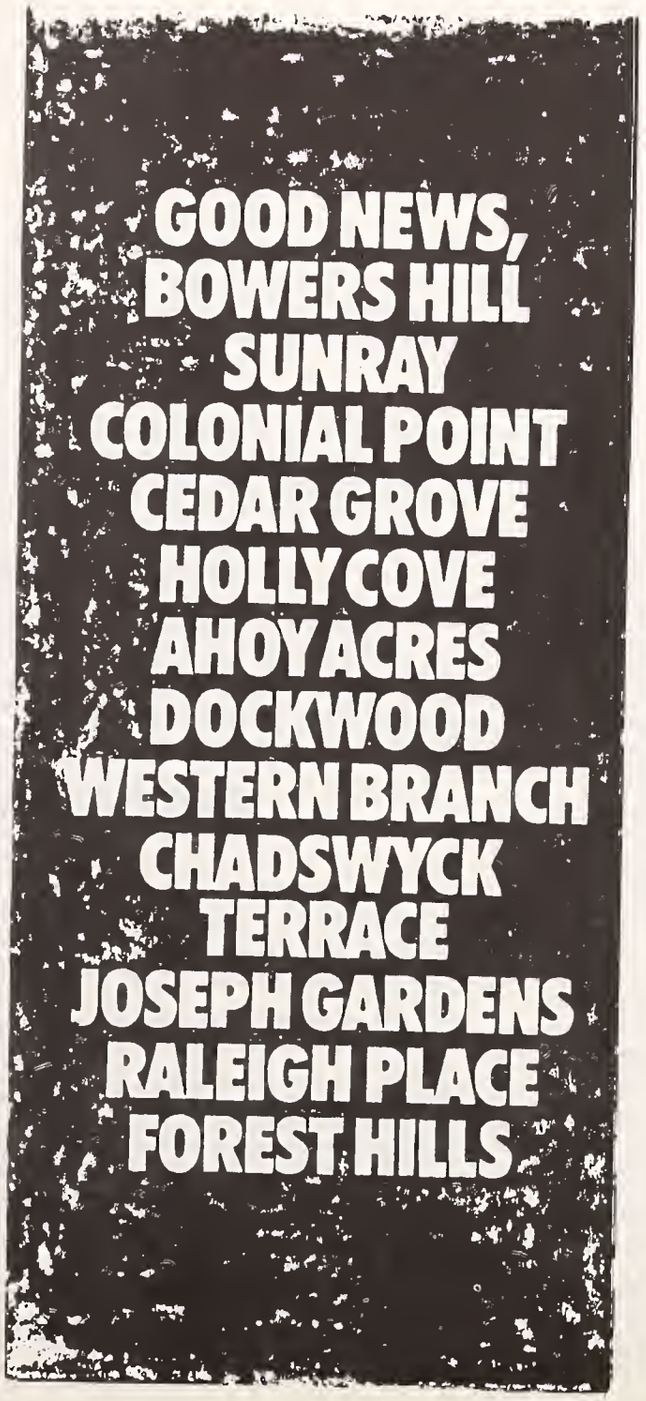
Bowers Hill & Tower Mall

TRT

MAXI TAXI

It's a whole new trip in savings and service!

FIGURE 3-3. MAXI-TAXI BROCHURE



Maxi-Taxi Now Serves Your Neighborhood

The following questions and answers explain procedures for using Maxi-Taxi. If you have additional questions, call TRT at 623-3222.

Where can I go on Maxi-Taxi?

From the neighborhoods at the left, you are picked up at your door and service is within the map area, to the TRT Bus Stop at Tower Mall. You may also travel to anywhere within the service area. Return service is available from Tower Mall.

When does Maxi-Taxi operate?

Maxi-Taxi service is available Monday through Saturday, between 6:00 a.m. and 7:00 p.m.

How much does it cost to ride?

The cost is $1 each way, which includes an all-zones ticket for the TRT bus system. If you are going to use the bus ticket, and will make a round trip, be sure and purchase two tickets in the Maxi-Taxi. TRT bus operators do not sell Maxi-Taxi tickets with this special all-zones bus ticket.

How do I pay?

You must pay cash for tickets to the Maxi-Taxi operator.

How do I get pickup at my home?

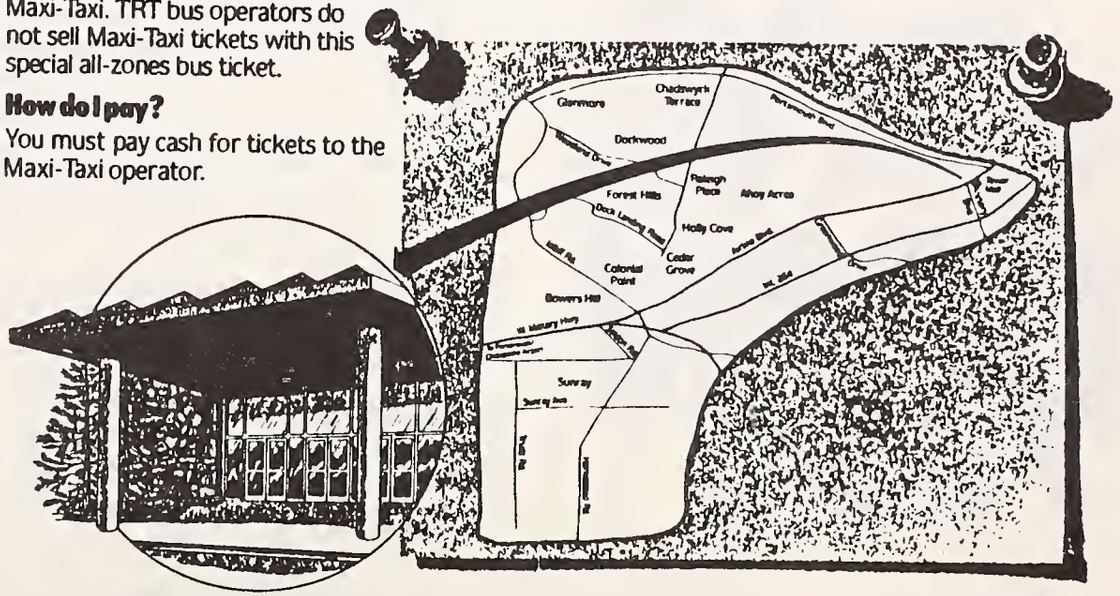
Call Yellow Cab of Chesapeake at 543-3333 for pickup. Be sure you specify the TRT Bower's Hill Maxi-Taxi when you call. You will be picked up at your door, usually within one hour, and taken to your destination. It's an express trip, with no other stops except to pick up other neighbors.

How do I take Maxi-Taxi from Tower Mall?

After shopping, proceed directly to the Maxi-Taxi stand located outside the front entrance where you were dropped off. Take the van with the Maxi-Taxi sign.

How often do Maxi-Taxis leave Tower Mall?

The schedule is for departures once every hour, on the hour — starting at 7:00 a.m. You will ride with any other persons going to your neighborhood and surrounding neighborhoods.



Maxi-Taxi departs Tower Mall here.

Area served by Maxi-Taxi

FIGURE 3-3. (Continued)

which is shown in Figure 3-4. These reports contained information on in-service hours, cost, ridership, and revenue. This basic data was used to derive indices on net cost (deficit) and net cost per passenger, the principal measures of effectiveness used by TRT to add, delete, or modify services. Operating data were abstracted from the monthly invoices from operators, driver manifests, and TRT fare counts.

TRT also conducted qualitative evaluations of Maxi-Taxi operations. Service representatives made regular ride checks on each service installation. Some of these checks were covert, inspecting service quality, courteousness, and related factors. Other checks involved interviews of both operators and passengers. This information was used in planning service changes and marketing efforts to improve image. Sample service reviews may be seen in Appendix C.

In addition to the routine monthly evaluations, TRT also conducted periodic detailed analysis of ridership and performance. Several staff-administered on-board rider surveys were conducted to determine ridership composition, trip purpose and frequency, origin-destination patterns, and transfer patterns. Periodic analysis was also made of driver trip manifests. These data were used to generate information on productivity, travel patterns, travel time, and scheduling difficulties.

3.3.5 Service Changes

Based on the results of the ongoing monitoring program, shifting budget resources, fare changes and other factors, numerous modifications were made in the Maxi-Taxi services over the course of the demonstration. These modifications are discussed below, and summarized in Table 3-2. Of course, changes in level of service or fare also affect demand and performance, and these aspects of the service alterations are discussed in the next chapter, which deals with Maxi-Taxi service impacts.

1. Ridership on the Suffolk Rural Maxi-Taxi was extremely low, and significant market potential was not detected. As a result, this service was discontinued on March 1, 1981.

TO: File

FILE: A. Jeff Becker

SUBJECT: Ocean View/Bayview Maxi-Taxi 1981 Evaluations

	In-Service Hours	Cost	Passengers	Revenue	Deficit	Deficit/ Passenger
Bus Route #14 (4th Quarter FY 80)	300	$ 8,940	1,680	$ 570	$8,370	$4.98
Maxi-Taxi Nov. 23-Dec. 31	370	5,698	1,566	653	5,045	3.24
January	300	4,200	1,242	522	3,678	2.96
February	280	4,312	1,085	434	3,878	3.57
March	310	4,991	1,223	428	4,563	3.73
April	300	4,830	1,461	511	4,319	2.96
May	310	4,991	1,460	511	4,480	3.07
June	300	4,830	1,617	566	4,264	2.64
Fare increased from 50¢ to $1.00 July 5, 1981						
July	310	4.991	1,323	1,323	3,668	2.77
August	310	4,991	1,361	1,361	3,630	2.67
Service area expanded to cover Willoughby, vans increased from 1 to 2, hours extended a.m. and p.m. and Jitney-Ride in peak periods.						
September						
Maxi-Ride	531	7,433	2,246	2,246	5,188	2.31
Jitney-Ride	94	1,315	1,207	604	712	0.59
	625	8,748	3,453	2,850	5,900	1.71
Revenue from bus transfer riders allocated to bus route of origin. Therefore, average fare reduced.						
October						
Maxi-Ride	613	8,588	2,698	2,050	6,538	2,42
Jitney-Ride	121	1,694	1,540	462	1,232	0.80
	734	$10,282	4,238	$2,512	$7,770	$1.83

FIGURE 3-4. MAXI-TAXI MONTHLY EVALUATION REPORT

TABLE 3-2. SUMMARY OF MAXI-TAXI SERVICE CHANGES

Service Area	Date Effective Service Change	Number Vehicles	Operating Hours	One-way Fare	Reason for Change
Suffolk Rural	Nov. 23, 1980	1	9am - 2pm M - Sa	$2.00	
	March 1, 1981		Terminated		Extremely low ridership
Churchland	Nov. 23, 1980	2	6am - 7pm M - Sa	$1.00	
	March 1, 1981	1			Limited market and ridership
	July 5, 1981			$1.50	Systemwide adjustment
	Nov. 1, 1981		7am - 6pm M - Sa		No ridership outside these hours
Bowers Hill	Nov. 23, 1980	1	6am - 7pm M - Sa	$1.00	
	July 5, 1981			$1.50	Systemwide adjustment
	Sept., 1981				Service area expanded
Great Bridge/ Greenbrier	Nov. 23, 1980	2	8am-5:30pm M - Sa	$1.00	
	March 1, 1981	1			Insufficient ridership
College Park	Nov. 23, 1980	2	8am-5:30pm M - Sa	$1.00	
	March 1, 1981		Terminated		Extremely poor ridership

TABLE 3-2. SUMMARY OF MAXI-TAXI SERVICE CHANGES (Continued)

Service Area	Date Effective Service Change	Number Vehicles	Operating Hours	One-way Fare	Reason for Change
Portsmouth Night service	Nov. 23, 1980	4	7pm-10pm M - Sa	$.50	
	March 1, 1981	3			Insufficient ridership
	July 5, 1981			$1.50	Systemwide adjustment
	Nov. 1, 1981		Terminated		Continued high deficit and funding problems with City of Portsmouth
Granby Mall	Nov. 23, 1980	1	11am-2pm M - F	free	
	April 3, 1981		Terminated		Discontinued as demonstration, continued by City of Norfolk
Hampton Blvd.	Nov. 23, 1980	2	7pm-midnight M-Sun	$.50	
	March 1, 1981	1			Insufficient ridership
	July 5, 1981			$1.00	Systemwide adjustment
Ocean View/ Bayview	Nov. 23, 1980	2	8am - 6pm M-Sun	$.50	
	July 5, 1981			$1.00	Systemwide adjustment
	Sept. 6, 1981	3			Good ridership, jitney service added
Coronado	Nov. 23, 1980	1	9pm - 1am M-Sun	$.50	
	July 5, 1981			$.60	Systemwide adjustment
Deep Creek	Nov. 23, 1980	1	6am - 7pm M - Sa	$1.00	
	July 5, 1981			$1.50	Systemwide adjustment

2. After 60 days of service, an assessment of the Churchland Maxi-Taxi determined that neither ridership nor market potential warranted two vans. One van was eliminated on March 1, 1981. After almost a year of service, it was found that only a few people rode the Maxi-Taxi before 7:00 a.m. and after 6:00 p.m. Subsequently, service was reduced to 7:00 a.m. to 6:00 p.m. on November 1, 1981.

3. The Bowers Hill Maxi-Taxi was revised to supplement the Deep Creek service area. Based on ridership, it was estimated that 40% of the Bowers Hill Maxi-Taxi's time was spent in Deep Creek. Therefore, this cost (and ridership and revenue) was added to Deep Creek's performance inventory, which changed the evaluation basis for each service. As part of a fixed-route bus service reduction, it was decided to expand the service area of the Bowers Hill Maxi-Taxi to include the adjacent Simonsdale neighborhood in Portsmouth. Bus service to Simonsdale was terminated by truncating a route at Tower Mall. The new Bowers Hill/Simonsdale service area, providing transfers to bus service at Tower Mall, was implemented in September 1981.

4. The Great Bridge/Greenbrier service showed promise in developing ridership; however, only one van was required based on ridership during the first 60 days of service. Therefore, one van was eliminated effective March 1, 1981. Also, this van was used to supplement Deep Creek about 25% of the time, so this cost and revenue was allocated to Deep Creek, as in the case of Bowers Hill above. After several more months, this service was again evaluated. Because of the high net cost per passenger and funding limitations of the demonstration project and the City of Chesapeake, service was terminated.

5. Due to consistently low ridership, the College Park service was terminated March 1, 1981.

6. Initial ridership on the Portsmouth Night Service was good, and the general market potential for the area appeared very promising. However, after the first 60 days of service, it was felt that four vans were in excess of the requirement to serve this area; on March 1, 1981, one van was terminated. Unfortunately, because of funding constraints within the demonstration project and with the City of Portsmouth, the continued high net cost per passenger could not be sustained, and the entire service was terminated November 1, 1981.

7. The Granby Mall Shuttle operated very effectively with the lowest net cost per passenger of all services, but was discontinued as a demonstration in April 1981. The City of Norfolk subsequently accepted the funding responsibility for the service, and it remains in operation.

8. The Hampton Boulevard Maxi-Taxi was designed to serve riders who formerly used TRT buses. Two vans were assigned to this area to handle the anticipated bus spillover, but ridership warranted only one. Hence, one van was eliminated effective March 1, 1981.

9. Ridership in the Ocean View/Bayview service area was very good, and a larger potential market was seen. TRT proposed to expand the service area to cover the Mason Creek and Willoughby areas while terminating bus service to Willoughby. The result was both an increase in areawide Maxi-Taxi service, as well as the inauguration of jitney service. Jitney is a term used to describe a service, typically provided by a private operator, which maintains a standard route and employs small vehicles (smaller than conventional bus) operating on frequent headways. A fixed-route jitney service, known as Jitney-Ride, was provided during weekday peak periods on Willoughby Blvd. at a fare of $.50 to connect with TRT bus service at the Ocean View Station. This service expansion became effective September 6, 1981.

10. TRT conducted five public hearings throughout Tidewater during the spring of 1981 concerning service and fare changes for the entire TRT transit system. No significant public reaction was received on the proposals. New fares for Maxi-Taxi became effective July 5, 1981, as follows:

Service Area	Old Fare	New Fare
Churchland	$1.00	$1.50
Bowers Hill	1.00	1.50
Deep Creek	1.00	1.50
Portsmouth Night	.50/.20 zone	1.50
Hampton Boulevard	.50/.20 zone	1.00
Ocean View	.50/.20 zone	1.00
Coronado	.50/.20 zone	.60/.25 zone
Granby Mall	Free	.10

11. TRT's successful pilot of jitney service on the Willoughby route in Ocean View set the stage for further Jitney-Ride installations. On July 4, 1982 (six months after the end of the demonstration), three new installations were inaugurated. The first of these was a two-vehicle (minibus) system operating in the business district of Virginia Beach, Monday through Saturday from 6 a.m. to 6 p.m. The other two installations were one-vehicle Sunday services which operate in Norfolk.

In addition to the service changes produced by standard performance monitoring, the qualitative service evaluations also furnished initiatives for service improvements.

Problems with productivity drew the major interest in TRT's operations analysis of Maxi-Taxi. Reductions in vehicle fleets as a strategy for reducing costs has the obvious impact of reducing levels of service as well. TRT maintained continuing discussions with the service operators on schemes for maximizing performance with available capacity. Recommendations included scheduling of trip requests into tours; TRT believed that if this approach were used, better service and a higher level of productivity would result. Other strategies recommended by TRT to improve performance were to stop providing service outside of the defined service area or beyond the established operating hours.*

Other actions occurred in response to the general quality of the service provided, as it affected the image of Maxi-Taxi to the public. Covert observers reported numerous objectionable aspects of the way service was being delivered, following which TRT required changes in practice from the providers. These actions included:

- Dismissal of drivers in various cases for improper conduct, such as free transportation of friends or relatives, being discourteous, or pocketing fares.
- To avoid fare disputes, drivers were instructed to collect a fare upon each boarding of the vehicle; hence, if a rider requested the van to stop en route, there would be no question regarding the requirement of a new fare payment. In the event of a fare dispute, riders were asked to pay the requested fare and call TRT with the complaint.
- Vehicle housekeeping was found to be slovenly and unprofessional. Owners and drivers were formally required to police the vans for litter and trash daily, bring the vans to TRT weekly for thorough cleaning, and to display "no smoking, eating or radio playing" signs in the vehicle.
- Dispatchers and drivers were encouraged to improve communication (and courtesy to riders), to better coordinate pickups and avoid long passenger wait times or vehicle no-shows. Particular attention was given to reliable on-time pickups.

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*This was happening to a limited extent, and, based on its desire to maintain a flexible arrangement with its contractors, TRT was covering these expenses; in light of poor service and rising costs, it recommended that these practices be dropped.

- Improvements were suggested in delivery of night service, focusing on better methods for illuminating and identifying the vans.

In October of 1982, TRT scored an important victory during contract negotiations with its operators' union in securing a special paratransit operator's rate--$4.50 per hour with limited fringe benefits vs. $9.70 per hour with full fringes for the average regular employee. This settlement gave TRT the capability to provide the Maxi-Taxi services in-house for approximately the same cost as the private contract service, $13 to $15 per hour, including capital costs and overhead. It has since used this in-house capability, not to eliminate the private operator aspect of the Maxi-Taxi service, but to leverage service quality and cost control from the private operators. As of late 1983, TRT was operating its Ocean View (2 vehicles) and Hampton Blvd. (1 vehicle) Maxi-Taxis through private contract, while the Deep Creek, Churchland, and Bowers Hill (1 vehicle each) Maxi-Taxis were provided in-house. These arrangements are subject to change at any time.

TRT is also using the paratransit operators' role as the basis for expanding internally-provided jitney services, like the Willoughby Jitney-Ride. As of February 1983, TRT implemented eight new jitney-type services, using 25-passenger minibuses. Three of these services are provided by private contractors and the remainder by TRT. Half of these new services are all-day operations, while others operate only evenings, during peak periods, or on weekends. In four cases, the minibus service is running scheduled route service along with the regular TRT bus (2 of these are contract and 2 are TRT services). In some cases, the minibuses are being used as trippers. TRT plans further experimentation with and expansion of these services.

4. PROJECT IMPACTS

4.1 INTRODUCTION

This chapter discusses the major impacts of the Maxi-Taxi demonstration, expressed in terms of level of service provided, ridership, and service costs, productivity, and profitability. Level of service is described in terms of coverage, frequency, waiting time and fares. Ridership effects are examined through monthly ridership trends and traveler and trip characteristics from on-board surveys. Productivity and cost impacts, both total and net cost, are examined for Maxi-Taxi, relative to the previous fixed-route bus service where such comparisons can be made. The chapter also discusses major institutional findings, related to contracting arrangements and management of the Maxi-Taxi services.

4.2 LEVEL OF SERVICE

4.2.1 Coverage

Virtually all Maxi-Taxi services offered riders doorstep-to-doorstep service anywhere within their respective service areas. In this respect, the Maxi-Taxi was an advantage to many people who found it difficult to get to or from a conventional bus line. Nine of the eleven services offered areawide service; only the Coronado night service and the Granby Mall Shuttle were solely fixed-route operations. The Suffolk service fell somewhat in between in being an areawide, on-call service that also normally performed scheduled route service.

All areawide Maxi-Taxis focused service on at least one central node in the service area, typically the major activity center or centers within the service area, and also, or in addition, at a transfer point to the regional bus system. These key destinations were listed in Table 3-1. Persons wishing to return home by Maxi-Taxi would typically connect with the service at the central node/transfer point, or pre-arrange the pickup time and location with the driver or dispatcher.

In terms of temporal coverage, all Maxi-Taxis except the Granby Mall Shuttle (Monday-Friday) operated at least Monday through Saturday, while the Hampton Blvd., Ocean View/Bayview, and Coronado services operated on Sunday as well. The Suffolk service, as described earlier, split its service among three different areas, each receiving two days per week. Operating hours varied by location, as previously indicated in Tables 3-1 and 3-2.

4.2.2 Service Frequency

Service frequency was previously summarized in Table 3-1. All of the areawide services operated on an on-call basis for travel from the home. Most of these, including Churchland, Bowers Hill, Great Bridge/Greenbrier, College Park, Ocean View/ Bayview, and Deep Creek, offered service within 60 minutes of request. Portsmouth (night service) and Hampton Blvd. offered doorstep service with as little as 30 minutes advance notice. The remaining areawide service, Suffolk, required users either to go to scheduled stops where vehicles arrived approximately every hour, or to call before 3 p.m., the previous day, for doorstep service. All areawide services offered return trips at least every 60 minutes from the central nodes/transfer points. Churchland offered return service every 50 minutes, Hampton Blvd. every 40 minutes, and Portsmouth night service every 30 minutes. If the Maxi-Taxi route was operating in a feeder capacity to fixed-route transit, as in the case of Bowers Hill, Great Bridge/Greenbrier, College Park, Hampton Blvd., Ocean View/ Bayview, and Deep Creek, service departure from the central node/transfer point was coordinated with the fixed-route bus.

The 60-minute on-call service policy for the areawide Maxi-Taxis should be clarified. While users were offered service within one hour of their request, trip timing was largely established by the Maxi-Taxi schedule. Specifically, if the Maxi-Taxi operation was normally scheduled to arrive at a central node or transfer point at a particular time, as to meet an arriving bus, that connection would dominate the trip itinerary and the user

would have to adjust his/her departure/arrival time to the Maxi-Taxi schedule. Exceptions could be made if there were no outstanding service requests, but this was generally not the case in systems designed to provide feeder service. Maxi-Taxi, in short, was not programmed to serve emergency travel needs.

Of the non-areawide services, the Coronado evening service operated on a set schedule between 9 p.m. and 1 a.m., providing service on approximately 1-hour headways. The Granby Mall Shuttle operated on 20-minute headways during the midday, from 11 a.m. to 2 p.m.

4.2.3 Travel Time and Wait Time

Maxi-Taxi typical travel time and waiting times are summarized in Table 4-1. Unfortunately, equivalent data on the previous TRT fixed-route bus services are limited, so these characteristics cannot be directly compared. Only scheduled headways on the eliminated bus services are known with any degree of certainty, and these varied from 30 minutes to 2 hours as shown in Table 4-1. Because bus arrival times were reported in a public timetable, users would be expected to "cap" their wait time in light of widely-spaced bus arrivals, hence the bus headway cannot be realistically used as a surrogate for user wait time.

Average Maxi-Taxi in-vehicle time ranged from a low of 14 minutes per trip on the Hampton Blvd. service to 29 minutes on the Deep Creek service, for an average of 22 minutes overall. These data were obtained from June 1981 driver trip records.

The available data on waiting time consists of user responses to a question included in TRT's on-board passenger survey about the length of time respondents had to wait for the Maxi-Taxi. Wait time by this definition is calculated by subtracting pickup time from the time service was promised. These data are summarized in Table 4-1. Overall, the average waiting time was 7.0 minutes. The services with the largest average waiting time were Willoughby with 10.4 minutes and Deep Creek with 9.4 minutes.

TABLE 4-1. MAXI-TAXI TRAVEL TIME AND WAIT TIME

Maxi-Taxi Route	Average[1] In-Vehicle Time, in Minutes	Average[2] Wait Time, in Minutes	Scheduled Headway, Pre-Existing Bus Service, in Minutes
Churchland	18 (1091)	6.3 (820)	60
Bowers Hill	15 (738)	3.5 (953)	60
Hampton Blvd.	14 (572)	5.0 (463)	30 (peak) 60 (off-peak)
Ocean View	19 (1617)	5.7 (2588)	30 (off-peak) 60 (off-peak)
Willoughby	NA	10.4 (1453)	NA
Deep Creek	29 (1689)	9.4 (1245)	120
Portsmouth	28 (1179)	NA	NA
Average[3]	**22 (6886)**	**7.0 (7522)**	

[1]Time on-board vehicle, obtained from June 1 to June 6, 1981 daily operators' reports; number of total monthly passenger trips in parentheses.

[2]Difference between time service promised and actual arrival, obtained from November 1981 on-board survey; number of total monthly passenger trips in parentheses.

[3]Weighted by total monthly passenger trips (in parentheses).

Services with the shortest waiting times were Churchland with 3 minutes and Hampton Blvd. with 5 minutes.

4.2.4 Fares

Maxi-Taxi fares ranged from $.50 to $2.00. The Granby Mall Shuttle, which did not remain a Maxi-Taxi service, was offered as a fare-free service. Generally, the Maxi-Taxi services which were implemented as fixed-route replacements, i.e., Hampton Blvd., Ocean View/Bayview, Coronado and Portsmouth, were introduced with the same fare structure as the previous bus. This fare was $.50 per trip plus a $.05 transfer charge and $.20 zone charge, as applicable. As Table 3-2 earlier indicated, most fares were increased during the course of the demonstration. Each of the above services was subject to a systemwide fare increase on July 5, 1981. Portsmouth was increased from $.50 to $1.50, Hampton Blvd. and Ocean View from $.50 to $1.00, and Coronado from $.50 to $.60.

The areawide services--Churchland, Bowers Hill, Great Bridge, College Park, and Deep Creek--all started out with fares of $1.00, which included the all-zones bus transfer ticket. Great Bridge and College Park were terminated at an early stage. Fares on the remaining services were increased from $1.00 to $1.50 on July 5, 1981.

Largely because of the size and low density of its service area, the Suffolk rural service was introduced with the highest fare level, $2.00. Poor ridership caused the service to be terminated before any fare adjustment could be considered.

4.2.5 Aggregate Service Hours

Tables 4-2 and 4-3 describe Maxi-Taxi level of service in another fashion, using total vehicle-hours of service provided as the measure. Table 4-2 shows total monthly service hours provided varied over the course of the project, pursuant to the modifications effected by TRT, along with the vehicle-hours provided by the previous fixed-route bus, where bus service was replaced by Maxi-Taxi. The reasons for the service modifications

TABLE 4-2. MAXI-TAXI MONTHLY SERVICE HOURS

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	None	208	148	150	T									
Churchland	N/A	N/A	676	624	338[1]	338	335	338	351	338	338	351	263[2]	286
Bowers Hill	120	434	250	204	203	226	213	248	263	190	214	267	242	277
Great Bridge	N/A	589	494	369	198[1]	235	247	T						
College Park	None	496	416	416	T									
Portsmouth Night	None	434	364	336	234[3]	234	234	234	243	234	299	311	T	
Granby Mall	None	66[5]	57	63	75	T								
Hampton Blvd.	285	444	300	280	155[1]	150	155	150	155	155	150	155	140	150
Ocean View/Bayview	300	370	300	280	310	300	310	300	310	310	531[4]	613	562	589
Maxi-Taxi											94	121	109	121
Jitney-Ride														
Coronado	112	185	155	112	124	120	124	120	124	124	104	126	116	120
Deep Creek	N/A	364[5]	426	588	522	462	463	428	439	486	462	435	380	399
TOTAL	**817**	**3950[6]**	**3586**	**3422**	**2159**	**2065**	**2081**	**1818**	**1885**	**1837**	**2192**	**2379**	**1812**	**1942**

T = terminated

[1]Service reduced from 2 vans to 1 van, 3/1/81

[2]Daily operating period reduced by 2 hours

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service expanded from 2 to 3 vans and service hours extended, 9/6/81

[5]Month of December only

[6]Does not include Churchland

in Table 4-2 are covered in greater detail in Table 3-2. Table 4-3 presents these data in slightly different format by indicating the number of vehicle-hours that were provided in an average week. This measure enables a more direct comparison of service variations by controlling for month-to-month differences in number of days of operation.

4.2.6 Vehicle Condition and Driver Courtesy

As indicated earlier in the report, TRT maintained surveillance over the delivery of Maxi-Taxi service. TRT's covert observers identified a number of areas in which the general quality of service was deficient. Early problems were encountered with regard to unprofessional or discourteous behavior on the part of drivers and dispatchers, poor vehicle housekeeping, and both poor communications and reliability when responding to service requests. By bringing these problems to the attention of the service contractors during contract renewal negotiations, TRT was able to bring about satisfactory improvements in these service characteristics.

4.3 DEMAND

4.3.1 Trends in Ridership Over Time

Maxi-Taxi monthly ridership for each service area is summarized in Table 4-4. The table also describes and indicates the time of occurrence of major service changes, and allows observation of their impact on ridership. On most routes, the number of vans providing service was changed in either March or September 1981; these alterations affected the level of service experienced by the consumer. In July 1981, a major fare increase was implemented which affected all Maxi-Taxi services.

Maxi-Taxi ridership levels varied from a low of 20 to 50 riders per month on the Suffolk Rural service to a high of 2,600 riders on the Ocean View Maxi-Taxi. Except Ocean View, all services which replaced fixed-route bus realized significantly lower monthly riderships than bus. All services except Bowers

TABLE 4-3. MAXI-TAXI WEEKLY SERVICE HOURS

Route	Nov. 23-Dec. '80	Jan. '81	Feb. '81	March '81	April '81	May '81	June '81	July '81	Aug. '81	Sept. '81	Oct. '81	Nov. '81	Dec. '81
Suffolk Rural	30	30	30	T									
Churchland	156	156	156	78[1]	78	78	78	78	78	78	78	66[2]	66
Bowers Hill	78	78	78	78	78	78	78	78	78	78	78	78	78
Great Bridge	114	114	114	57[1]	57	57	T						
College Park	114	114	114	T									
Portsmouth Night	72	72	72	54[3]	54	54	54	54	54	54	54	T	
Granby Mall	15[5]	15	15	15	T								
Hampton Blvd.	70	70	70	35[1]	35	35	35	35	35	35	35	35	35
Ocean View/Bayview Maxi-Taxi Jitney-Ride	140	140	140	140	140	140	140	140	140	210[4] 30	210 30	210 30	210 30
Coronado	28	28	28	28	28	28	28	28	28	28	28	28	28
Deep Creek	78	78	78	78	78	78	78	78	78	78	78	78	78
TOTAL	**895**	**895**	**895**	**563**	**548**	**548**	**491**	**491**	**491**	**591**	**591**	**525**	**525**

T = Terminated

[1]Service reduced from 2 vans to 1 van, 3/1/81

[2]Daily operating period reduced by 2 hours

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service expanded from 2 to 3 vans and service hours extended, 9/6/81

TABLE 4-4. MAXI-TAXI MONTHLY RIDERSHIP

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	23	54	14	T									
Churchland	N/A	N/A	1771	1657	1221[1]	1101	1091	1091	965[a]	896	901	852	760	820
Bowers Hill	1586	650	821	691	732	728	665	738	717[a]	515	594[2]	796	762	953
Great Bridge	N/A	651	874	721	601[1]	738	751	T						
College Park	N/A	61	158	202	T									
Portsmouth Night	N/A	1262	1423	1375	1293[3]	1444	1270	1179	827[b]	745	647	496	T	
Granby Mall	N/A	4663[5]	2047	2307	3082	T								
Hampton Blvd.	4696	1029	1003	885	607[1]	629	575	572	377[c]	350	357	462[d]	373	463
Ocean View/Bayview Maxi-Taxi Jitney-Ride	1680	1556	1242	1085	1223	1461	1460	1617	1323[c]	1361	2246[4] 1207	2698[d] 1540	2471 1397	2588 1453
Coronado	1858	714	714	738	822	844	1024	929	924[e]	606	609	614[d]	546	600
Deep Creek	N/A	1828[5]	1672	2274	2356	2171	2090	1689	1364[a]	1331	1281	1316[d]	1199	1245
TOTAL	**9820**	**12437**	**11779**	**11949**	**11937**	**9116**	**8926**	**7815**	**6497**	**5804**	**7842**	**8774**	**7508**	**8122**

T = terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

Hill and Ocean View showed a gradual decline in ridership over the 12-month demonstration.

As was the case with service hours, depicting Maxi-Taxi ridership on a monthly basis is subject to the bias that the days of service per month vary. To compensate for this bias Table 4-5 is provided, which allows comparison of ridership across services on an equivalent average weekly basis.

The impact of the fare and service changes are summarized in Table 4-6. The Suffolk, College Park, and Granby services are not included in this analysis since they were terminated at the time of the first service adjustments. Table 4-6 presents a calculation of the percentage change in ridership accompanying either major fare or service changes. The data used for these comparisons are the "average weekly" measures taken from Tables 4-3 and 4-5, to minimize biases due to length-of-month variation. Service changes, as they occurred for most routes in March 1981, consisted simply of the loss of a vehicle from the service area; the exception is Ocean View/ Bayview, which gained service in September 1981 in form of a peak-period, high-frequency jitney service. A simple elasticity relationship to quantify the impact of either the service change or fare increase on demand has been calculated.

Predictably, changes in service have a greater demonstrated impact on ridership than do fare changes. Using "service hours" as an approximation for level of service, service elasticities for Maxi-Taxi were calculated in the range 0.534 to 1.53, compared to fare elasticities ranging from -.129 to -.446. In all cases, where a route received both service and fare changes, the service changes had the larger impact.

The results show no obvious correspondence between the type of service and the service or fare elasticities realized; admittedly, these variations are masked by differences in market demographics and the level of service before the change. It is again pointed out that the significant patronage gain on the Ocean View/Bayview route is tied to implementation of the special jitney service in September, which makes this service very different from the others. The largest patronage loss due to a

TABLE 4-5. MAXI-TAXI WEEKLY RIDERSHIP

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	4	12	4	T									
Churchland	N/A	N/A	394	414	282[1]	254	252	252	214[a]	207	208	189	182	182
Bowers Hill	365	118	182	173	169	168	153	170	159[a]	119	137[2]	177	183	212
Great Bridge	N/A	118	194	180	139[1]	170	173	T						
College Park	N/A	11	35	51	T									
Portsmouth Night	N/A	229	316	344	298[3]	333	293	272	184[b]	172	149	110	T	
Granby Mall	N/A	1014[5]	465	577	700	T								
Hampton Blvd.	1081	190	226	221	137[1]	147	130	133	85[c]	79	83	104[d]	87	104
Ocean View/Bayview Maxi-Taxi Jitney-Ride	387	287	280	271	276	341	330	377	299[c]	307	524[4] 282	609[d] 348	576 326	584 328
Coronado	428	132	161	184	186	197	231	217	209[e]	137	142	139[d]	127	135
Deep Creek	N/A	332[5]	372	569	544	501	482	390	303[a]	307	296	292[d]	288	277
TOTAL	**2261**	**2435**	**2637**	**2988**	**2731**	**2111**	**2044**	**1811**	**1453**	**1328**	**1821**	**1968**	**1769**	**1822**

T = terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

TABLE 4-6. IMPACT OF FARE AND SERVICE CHANGES ON RIDERSHIP
(Weekly Ridership in Parentheses)

	Service Change[1]				Fare Change[2]			
Route	Weekly Service Hours Before	Weekly Service Hours After	% Change	Implied[3] Elasticity	Fare Before	Fare After	% Change	Implied[4] Elasticity
Churchland	156	78	-50.0	.638	$1.00	$1.50	50.0	-.302
	(414)	(282)	-31.9		(252)	(214)	-15.1	
Bowers Hill					$1.00	$1.50	50.0	-.129
					(170)	(159)	-6.5	
Great Bridge	114	57	-50.0	.456				
	(180)	(139)	-22.8					
Portsmouth	72	54	-25.0	.534	$.50	$1.50	200.0	-.162
	(344)	(298)	-13.4		(272)	(184)	-32.4	
Hampton Blvd.	70	35	-50.0	.760	$.50	$1.00	100.0	-.361
	(221)	(137)	-38.0		(133)	(85)	-36.1	
Ocean View/ Bayview	140	240	171.4	1.53	$.50	$1.00	100.0	-.207
	(307)	(806)	262.5		(377)	(299)	-20.7	
Coronado					$.50	$.60	20.0	-.184
					(217)	(209)	-3.7	
Deep Creek					$1.00	$1.50	50.0	-.446
					(390)	(303)	-22.3	

[1]March 1, 1981, exc. Ocean View/Bayview: Sept. 6, 1981
[2]July 5, 1981
[3]Percent change in ridership divided by percent change in service hours
[4]Percent change in ridership divided by percent change in fare

service change, and also one of the largest fare-related losses, occurred on the Hampton Blvd. line, which was a replacement evening service. However, Coronado was also a replacement evening service and had the smallest fare-related patronage loss of any service.

4.3.2 Ridership Characteristics

To determine characteristics of Maxi-Taxi riders and trips, TRT conducted an on-board passenger survey on November 25, 1981, a full year after implementation of the service. The survey was administered by TRT employees, who rode in the vans and handed a questionnaire to each passenger on six routes: Bowers Hill, Deep Creek, Willoughby, Hampton Blvd., Ocean View, and Churchland. The survey gathered information on trip purpose, trip frequency, origin-destination, rider demographics, and awareness of and satisfaction with the service. A copy of the survey questionnaire may be found in Appendix D, along with question-by-question responses for each of the six routes.

The survey resulted in an overall sample of 108 Maxi-Taxi riders. Sample size for the individual routes ranges from 12 to 28 responses, which, of course, limits the ability to conduct statistical analysis of results by route. Therefore, the characteristics of Maxi-Taxi riders and tripmaking are analyzed as a group, with the results summarized in Table 4-7. Though their meaning is restricted due to small sample size, survey results by individual route have been tabulated and are presented in Appendix D for the interested reader. It should be noted that the survey results have not been weighted to reflect differences in trip frequency among sampled riders. Thus, some of the results may be biased in the direction of frequent travelers.

The survey results revealed that almost all Maxi-Taxi riders (92%) had used the service prior to the day of the survey, and a large proportion were frequent riders, with 44% of previous riders indicating that they rode Maxi-Taxi three times a week or more.

With regard to trip purpose, work and shopping were the most common trips taken on Maxi-Taxi. All travel in the sample was

TABLE 4-7. RESULTS OF MAXI-TAXI RIDER SURVEY*

Previous Use of Maxi-Taxi:

Yes	99	(92%)
No	9	(8%)

Frequency of Use (prior users only):

Once a Month	11	(12%)
At Least 4 Times a Month	17	(19%)
2 or 3 Times a Week	22	(25%)
More than 3 Times a Week	39	(44%)

Trip Purpose (distribution of trips by purpose):

Place Coming From			Place Going To		Net of Home	
Home	74	(64%)	40	(38%)	NA	
Work	13	(12%)	32	(30%)	45	(42%)
School	5	(5%)	2	(2%)	7	(7%)
Shop	14	(13%)	25	(24%)	39	(37%)
Personal Visit	7	(6%)	2	(2%)	9	(8%)
Medical	1	(1%)	5	(5%)	6	(6%)

Method of Travel from Maxi-Taxi to Final Destination:

Maxi-Taxi**	54	(52%)
TRT Bus	28	(27%)
Walk	16	(16%)
Ride w/Someone Else	5	(5%)
Drive	0	

How Made Trip Previously:

Bus	49	(50%)
Auto Driver	13	(13%)
Auto Passenger	15	(15%)
Taxi	6	(6%)
Walk	5	(5%)
Did Not Go	10	(10%)

Driver's License:

Yes	39	(37%)
No	67	(63%)

*Note that results have not be weighted to reflect differences in respondent trip frequency.
**Implies doorstep delivery.

TABLE 4-7. RESULTS OF MAXI-TAXI RIDER SURVEY* (Continued)

Number Vehicles Owned by or Regularly Available to Household:

None	48	(52%)
1	34	(37%)
2	8	(9%)
3 or More	3	(3%)

Annual Household Income:

Under $5,000	30	(41%)
$ 5,000 to $ 9,999	19	(26%)
$10,000 to $14,999	13	(18%)
$15,000 to $19,999	7	(10%)
$20,000 to $24,999	4	(5%)
$25,000 and Over	0	

Employment Status:

Full Time	46	(41%)
Part Time	24	(22%)
Not Employed	41	(37%)

Age:

Under 16	0	
16-20	17	(16%)
21-30	34	(31%)
31-40	7	(6%)
41-50	14	(13%)
51-64	20	(19%)
65 and Over	16	(15%)

Sex:

Male	19	(19%)
Female	80	(81%)

Physical Disability which Impairs Travel:

Yes:	21	(19%)
No:	89	(81%)

*Note that results have not be weighted to reflect differences in respondent trip frequency.

TABLE 4-7. RESULTS OF MAXI-TAXI RIDER SURVEY* (Continued)

Source of Information:

Someone Else	32	(30%)
From TRT	28	(26%)
Van in Operation	22	(21%)
Newspaper	9	(8%)
Brochure--picked up	8	(7%)
Brochure--delivered	6	(6%)
TV	2	(2%)

Service Satisfaction:

Percent Believing Vehicle Is:

Clean	90%
Comfortable	100%
Convenient	100%

Percent Believing Driver Is:

Courteous	98%
Helpful	96%
Neat	99%

Percent Believing Dispatcher Is:

Courteous	98%
Helpful	96%

*Note that results have not be weighted to reflect differences in respondent trip frequency.

home-based; that is, respondents were either coming from or going to their home. The survey indicated that 42% of all riders were traveling for the purpose of work, 37% were travelling for shopping purposes, 8% for personal visit, 7% for school, and 6% for medical.

Most riders indicated that Maxi-Taxi was their only travel mode on the trip. Fifty-two percent indicated that they would complete their trip on Maxi-Taxi, or 68% if those who walked to their final destination are included. Only 27% of all sampled trips involved a transfer to or from a TRT bus, despite the fact that the Maxi-Taxi fare included an all-zones transfer. Five percent indicated that they would be picked up by someone else, but none indicated that they would drive themselves.

Riders were asked how they made the particular trip in question before Maxi-Taxi existed. As Table 4-7 indicates, 10% did not make the trip before. Half (50%) made the trip by regular bus, 28% by private auto (13% as drivers, 15% as passengers), 6% by taxi, and 5% walked.

Only 37% of the riders in the sample possessed a driver's license. Fifty-two percent lived in households without access to a passenger vehicle. Only 13% came from households with 2 or more vehicles.

Correspondingly, most Maxi-Taxi riders came from households with low or modest incomes. Almost half (41%) had incomes under $5,000 per year, and fully two-thirds had incomes under $10,000. No rider represented a household with an income in excess of $25,000. Forty-one percent of the individuals were not employed, while about a third of those employed held part-time jobs.

Demographically, the majority of Maxi-Taxi riders were relatively young, although no children 16 or under were found in the sample. Forty-three percent of all riders fell in the 16 to 40 year age group, with the largest single block being the 21 to 30 age group (31%). The 51 to 64 year age group was the second largest group, comprising 19% of all riders. The elderly, aged 65 and over, made up only 15% of the ridership. Most riders were female (81%), and most were able-bodied (81% without travel-related impairments).

With regard to awareness of and attitudes toward the service, questions were asked to determine how the individual first found out about Maxi-Taxi, and then how satisfactory the service was in terms of dispatchers, drivers, and vehicles. Table 4-7 summarizes the responses to these questions. The most common method of learning about the service was by word-of-mouth (30%). Other common means were directly from TRT upon information request (26%), and seeing the service in operation (21%). Brochures and mass media accounted for only 23% of service introduction.

All riders gave the service high marks when asked how satisfactory the vehicle, driver, and dispatchers were. As seen in Table 4-7, at least 90% of the passengers felt that these elements were satisfactory. These feelings are reinforced by unsolicited comments on the service (not presented here), which were extensive and favorable. While reassuring, these comments are rather at odds with TRT's own covert evaluation activities in March 1981, which cited slovenly drivers and vehicles, intoxicated and discourteous dispatchers, and service no-shows. TRT was sufficiently concerned about the degree of these violations that they mounted an image campaign with the operators and pushed hard for better service. The positive survey responses suggest either that TRT's effort was successful, or that riders were indifferent to these service characteristics.

4.3.3 Origin-Destination Characteristics of Maxi-Taxi Travelers

From its on-board passenger surveys, TRT was also able to derive information on the origin-destination characteristics of travelers using the Bowers Hill/Deep Creek, Churchland, Hampton Blvd., and Ocean View/Willoughby Maxi-Taxis. While reporting the specific origin-destination patterns would have little meaning to readers unfamiliar with the service areas, it is interesting to note the proportion of total trips which were made to the central node(s) or transfer point(s) vs. the trips made to other locations. Results of this analysis are shown below:

Service Area	Central Nodes	Percentage of Trips to or from Central Node	Percentage of Trips Neither to nor from Central Node
Bowers Hill/ Deep Creek	Tower Mall	27.7	72.3
Churchland	Churchland Shopping Ctr.	10.7	89.3
Hampton Blvd.	Norfolk General Hospital	23.3	76.7
Ocean View/ Willoughby	Ward's Corner Southern Shopping Center	19.7	80.3

The data suggest that the majority of trips made by these Maxi-Taxi users were made neither to nor from the central nodes. In fact, the relatively small number of trips involving the central node implies that these Maxi-Taxis are providing users with true areawide service.

4.3.4 Comparison of Maxi-Taxi and TRT Bus Users

In several instances, Maxi-Taxi services were used as replacements for conventional TRT bus services. The Deep Creek, Hampton Blvd., Ocean View/Bayview, Churchland, and Coronado Maxi-Taxi were all replacement services for fixed-route bus. Passengers on the various fixed-route services were surveyed prior to elimination of the services in November 1980. The survey results permit comparison of the previous bus riders with the subsequent riders on Maxi-Taxi. A summary of these comparisons is provided in Table 4-8.

These statistics should be used for the most general comparisons only, since it is not possible to make the two samples directly comparable. Not all of the eliminated bus routes were surveyed, nor were all of the Maxi-Taxi replacements, and the correspondence between service areas is neither complete nor of even coverage. Sample size by individual service area is too small for meaningful direct comparison. Moreover, the results have not been weighted to account for differences in trip frequency among sampled riders. The 7-route bus on-board survey

TABLE 4-8. COMPARISON OF MAXI-TAXI[1] WITH PRIOR BUS[2]: ON-BOARD SURVEY RESULTS

Trip Frequency:

Daily Bus Trips		Maxi-Taxi Trips	
1	15%	Once a Month	12%
2	37%	At Least 4 Times a Month	15%
3	16%	2 or 3 Times a Week	23%
4	18%	More than 3 Times a Week	50%
5 or More	14%		

Ridership and Transfers:

Maxi-Taxi Ridership (December 1981)

	Number of Trips	Transfer To Bus	Transfer From Bus
Deep Creek	1,053	204	172
Hampton Blvd.	464	68	47
Ocean View	2,598	292	381
Churchland	820	182	162
	4,935	746 (15.1%)	762 (15.4%)

Trip Purpose:

	Bus	Maxi-Taxi
Work	56%	50%
School	10%	14%
Shopping	10%	33%
Social	13%	3%
Medical	3%	14%
Other	8%	0

Note: Results have not been weighted to reflect differences in trip frequency of sampled riders.

[1]Group Comprised of Deep Creek, Hampton Blvd, Ocean View and Churchland Maxi-Taxi.

[2]Group comprised of Routes 1,2,3,4,6,8, and 14.

TABLE 4-8. COMPARISON OF MAXI-TAXI[1] WITH PRIOR BUS[2]: ON-BOARD SURVEY RESULTS (Continued)

Maxi-Taxi Users' Previous Method of Travel

Didn't go	12%
Bus	49%
Drove	13%
Auto Passenger	16%
Taxi	5%
Walked	5%

Method of Egress from Vehicle to Final Destination:

	Bus	Maxi-Taxi
Vehicle is at Final Destination	19%	51%
Walk	68%	25%
Another Bus	12%	17%
Drive Car	0%	0%
Car Passenger	1%	7%

Driver's License (percent with):

Bus	59%
Maxi-Taxi	38%

Number Vehicles Owned/Available to Household:

	Bus	Maxi-Taxi
None	48%	45%
1	36%	41%
2	13%	11%
3 or More	3%	3%

Sex:

	Bus	Maxi-Taxi
Female	56%	77%
Male	44%	23%

Note: Results have not been weighted to reflect differences in trip frequency of sampled riders.

[1]Group Comprised of Deep Creek, Hampton Blvd, Ocean View and Churchland Maxi-Taxi.

[2]Group comprised of Routes 1,2,3,4,6,8, and 14.

TABLE 4-8. COMPARISON OF MAXI-TAXI[1] WITH PRIOR BUS[2]: ON-BOARD SURVEY RESULTS (Continued)

Age:

	Bus	Maxi-Taxi
Under 16	2%	0
16-20	22%	16%
21-30	47%	34%
31-40	10%	5%
41-50	7%	18%
51-64	10%	15%
65 and Over	3%	12%

Employment:

	Bus	Maxi-Taxi
Full Time	58%	45%
Part Time	13%	25%
Unemployed	29%	30%

Annual Household Income:

	Bus	Maxi-Taxi
Under $5,000	27%	41%
$ 5,000 to $ 9,999	42%	19%
$10,000 to $14,999	15%	20%
$15,000 to $19,999	6%	13%
$20,000 to $24,999	4%	7%
$25,000 or More	5%	0

Note: Results have not been weighted to reflect differences in trip frequency of sampled riders.

[1]Group Comprised of Deep Creek, Hampton Blvd, Ocean View and Churchland Maxi-Taxi.

[2]Group comprised of Routes 1,2,3,4,6,8, and 14.

produced a sample of 170 responses. On-board surveys on Maxi-Taxi routes implemented as replacements netted 71 responses.

As may be seen in Table 4-8, Maxi-Taxi and bus users were compared on the following characteristics: trip frequency, trip purpose, mode of egress to destination, driver's license, vehicle ownership, sex, age, employment, and income. The results suggest that Maxi-Taxi riders are generally more transit dependent.

The method of asking the question created difficulties in comparing Maxi and bus rider usage frequency directly. Half (50%) of Maxi-Taxi riders were frequent users, making more than three trips a week. Based on the distribution of response for bus riders, it is reasoned that the question as asked was misunderstood--i.e., over 30% of all bus riders indicated that they took four or more bus trips per day. This could mean that riders were counting each boarding in a linked trip as a separate trip, which characteristic renders the data misleading.

With regard to trip purpose, Maxi-Taxi and bus riders differed in that Maxi-Taxi was used considerably more for shopping travel (33% vs. 10%) and medical (14% vs. 3%), but much less for social/other travel (3% vs. 21%). Note that only about half (49%) of Maxi-Taxi users would have previously used bus for their travel.

The doorstep service aspect of Maxi-Taxi shows itself in the patterns of egress: 51% of Maxi-Taxi riders rode the vehicle to the final destination, compared to only 19% of bus riders.

As stated above, Maxi-Taxi riders appear to be a more transit dependent and economically disadvantaged population. Only 38% of Maxi riders had driver's licenses compared to 59% of bus riders, though with regard to vehicle ownership the two groups were roughly the same. Forty-five percent of Maxi riders were autoless compared to 48% of bus riders. A larger number of bus riders were employed full time than Maxi-Taxi riders (58% vs. 45%), but both groups had roughly the same percentage of unemployed passengers. However, 41% of Maxi-Taxi riders had household incomes of less than $5,000 per year, compared to 27% of bus riders.

Demographically, a larger proportion of bus riders were male (44% vs. 23%), and bus riders were generally younger: 81% of bus riders were 40 years of age or less, compared to only 55% of Maxi-Taxi riders, while 12% of Maxi-Taxi riders were elderly (65 and over), compared to 3% of the bus riders.

4.4 PRODUCTIVITY AND ECONOMICS

Productivity, or the efficiency of providing transportation service, may be defined in various ways. One measure of productivity is the average number of passengers carried per vehicle-hour of service. Of course, this measure means little unless the carrying capacity of the vehicle and the cost of providing service are also considered. Perhaps the most relevant measures of productivity are the total cost and the net cost (total cost minus fare) of providing service to the individual passenger. These measures of productivity automatically account for differences in vehicle size, cost and service characteristics. Comparing such statistics for the Maxi-Taxi services relative to TRT's conventional bus service sheds light on some interesting issues.

Table 4-9 depicts service efficiency as expressed in the simple measure of passengers per service hour. Productivity, thus defined, averages three to five passengers per hour for "typical" Maxi-Taxi services. Among this group, the highest passenger-carrying rates (around five passengers per hour) were realized on the straight-line, corridor service routes, such as Coronado, Ocean View and Portsmouth (before the fare was tripled in July 1981). The areawide services, such as Churchland, Bowers Hill, Hampton Blvd., and Deep Creek, had rates of about three per hour. Another distinction may be made between the "new" services vs. the "replacement" services. New services, exemplified by the Suffolk, College Park, and Great Bridge Maxi-Taxis, had very low ridership rates, averaging less than one person per hour. The replacement services, in contrast, including Churchland, Bowers Hill, Hampton Blvd., Ocean View, and Deep Creek, fared much

TABLE 4-9. PASSENGERS PER SERVICE HOUR

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	0.11	0.36	.09	T									
Churchland	N/A	N/A	2.61	2.66	3.62[1]	3.26	3.26	3.23	2.86[a]	2.56	2.67	2.43	2.89	2.87
Bowers Hill	13.20	1.50	3.28	3.39	3.61	3.22	3.12	2.98	2.73[a]	2.71	2.78[2]	2.98	3.15	3.44
Great Bridge	N/A	1.10	1.76	1.95	3.04[1]	3.14	3.04	T						
College Park	N/A	0.12	0.38	0.49	T									
Portsmouth Night	N/A	2.90	3.91	4.09	5.53[3]	6.17	5.43	5.04	3.40[b]	3.18	2.16	1.59	T	
Granby Mall	N/A	70.67	35.91	36.60	41.10	T								
Hampton Blvd.	16.50	2.32	3.34	3.16	3.92[1]	4.19	3.71	3.81	2.43[c]	2.26	2.38	2.98[d]	2.66	3.09
Ocean View/Bayview	5.60	4.21	4.14	3.88	3.95	4.87	4.71	5.39	4.27[c]	4.39	4.23[4]	4.40[d]	4.40	4.39
Jitney-Ride											12.84	12.73	12.82	12.01
Coronado	16.60	3.86	4.61	6.59	6.63	7.03	8.26	7.74	7.45[e]	4.89	5.86	4.87[d]	4.71	5.00
Deep Creek	N/A	5.02[5]	3.92	3.87	4.51	4.70	4.51	3.95	3.11[a]	2.74	2.77	3.03[d]	3.15	3.12
AVERAGE, ALL SERVICES	**12.02**	**3.15**	**3.28**	**3.49**	**5.53**	**4.41**	**4.29**	**4.30**	**3.45**	**3.16**	**3.58**	**3.69**	**4.14**	**4.18**

T = Service terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

better, averaging three to five persons per vehicle-hour. "Atypical" Maxi services, which do not directly compare to the others, are the Granby Mall service (a regular bus providing free or nearly free downtown shuttle service, and the Willoughby (Ocean View/Bayview) Jitney-Ride, a minibus operating at low fare/high frequency in the peak period on a high-density route. These services averaged 38 and 13 persons per hour, respectively. In comparison to the Maxi-Taxi, the conventional TRT bus services which were replaced by Maxi-Taxi averaged between 13 and 16 persons per hour. For both the typical Maxi-Taxi and the prior conventional bus, the average passenger loads represent less than half of the available capacity of the respective vehicle. Maxi-Taxi vans were either 12 or 15 passenger, while the standard buses were capable of carrying 45 seated passengers.

The per-hour ridership rates in Table 4-9 provide insight into the effects of the various fare and service changes. In most cases, the Maxi-Taxi fare increases or service reductions produced immediate and lasting reductions in the number of riders per service hour. Ridership rates appear to be fairly stable during the periods between changes, however. Perhaps the most interesting exception is the Portsmouth Night Service, which increased its ridership per service hour after the March 1 reduction in the number of vehicles in service, but then realized a precipitous decline following the significant fare increase in July. Riders per hour dropped steadily from five per hour to 1.6 per hour over the four months prior to termination.

More revealing than the ridership rates as a measure of efficiency are the data on **net cost** (deficit or subsidy) to provide service, and **net cost per passenger.** These data are displayed in Tables 4-10 and 4-11. The costs upon which these statistics are based include capital, operating, and administrative expenses for both the fixed-route bus and Maxi-Taxi.

The financial performance data in Tables 4-10 and 4-11 pose interesting tradeoffs to transit operators and society. TRT's principal reason for deploying Maxi-Taxi was to initiate or maintain public transportation service in areas which were not suitable for conventional, fixed-route bus, but to do so at

TABLE 4-10. MONTHLY NET COST

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	$3069	$2138	$2211	T									
Churchland	N/A	N/A	$8639	$8261	$4183[1]	$4304	$4268	$4314	$4358[a]	$4151	$3944	$4740	$3457	$3764
Bowers Hill	$3621	6034	3029	2632	2511	2893	2704	3228	3304[a]	2325	2468[2]	3261	2909	3248
Great Bridge	N/A	9852	6734	4967	2922[1]	3446	3653	T						
College Park	N/A	7031	5799	5070	T									
Portsmouth Night	N/A	7108	4966	6842	4952[3]	4900	4961	4993	4538[b]	4362	3699	4226	T	
Granby Mall	N/A	2462	2140	2309	2475	T								
Hampton Blvd.	6839	6406	4199	4713	2622[1]	2552	2663	2549	2487[c]	2514	1953	1999[d]	1905	1921
Ocean View/Bayview	9171	5615	4098	4309	5062	4802	4979	4247	4167[c]	4129	5930[4]	7397[d]	6805	7103
Maxi-Taxi											843	1401	1256	1427
Jitney-Ride														
Coronado	2675	2549	2087	1831	2091	2015	2029	1962	1971[e]	2114	1328	1554[d]	1469	1500
Deep Creek	N/A	3595[5]	4888	6902	6093	5239	5315	5157	5218[a]	5902	5307	5317[d]	4596	4835
TOTAL	22306	53721	48717	50047	32911	30151	30572	26450	26043	25497	25472	29895	22397	23798

T = Service terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

TABLE 4-11. NET COST PER PASSENGER

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	$133.43	$39.60	$157.93	T									
Churchland	N/A	N/A	4.88	4.99	$3.42[1]	$3.91	$3.91	$3.95[a]	$4.52	$4.63	$4.38	$5.56	$4.55	$4.59
Bowers Hill	2.28	9.28	3.69	3.81	3.43	3.97	4.12	4.37[a]	4.61	4.51	4.15[2]	4.10	3.82	3.41
Great Bridge	N/A	15.13	7.70	6.89	4.86[1]	4.67	4.86	T						
College Park	N/A	111.60	36.70	25.10	T									
Portsmouth Night	N/A	5.63	3.49	4.98	3.83[3]	3.39	3.91	4.24[b]	5.49	5.85	5.72	8.52	T	
Granby Mall	N/A	.53[5]	1.05	1.00	.80	T								
Hampton Blvd.	1.46	6.23	4.19	5.33	4.32[1]	4.06	4.63	4.46[c]	6.60	7.18	5.47	4.33[d]	5.11	4.15
Ocean View/Bayview Maxi-Taxi Jitney-Ride	5.46	3.61	3.30	3.97	4.14	3.29	3.41	2.94[c]	3.15	3.03	2.64[4] .70	2.74[d] .91	2.75 .90	2.74 .98
Coronado	1.44	3.57	2.92	2.48	2.54	2.39	1.98	2.11[e]	2.13	3.48	2.18	2.53[d]	2.69	2.50
Deep Creek	4.60	1.97[5]	2.92	3.04	2.59	2.41	2.54	3.05[a]	3.83	4.43	4.15	4.04[d]	3.83	3.88
AVERAGE, ALL SERVICES	**$2.27**	**$4.32**	**$4.14**	**$4.19**	**$2.76**	**$3.31**	**$3.43**	**$3.38**	**$4.01**	**$4.39**	**$3.25**	**$3.41**	**$2.98**	**$2.93**

T = Service terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

reduced net cost. Indeed, as seen in Table 4-10, in all cases where Maxi-Taxi has been implemented as a replacement for a deficit-plagued bus route, it has fulfilled this basic objective, i.e., Maxi-Taxi provides service at a lower **net cost** to TRT. However, because it provides less service (fewer service hours) and charges significantly higher fares, the substitution of Maxi-Taxi has also meant a significant decline in ridership compared to the pre-existing bus service. On balance, the reduction in ridership has outweighed the effect of higher fares on revenue. Hence, Maxi-Taxi generates proportionately less revenue and results in a higher **net cost per passenger** than the pre-existing bus. As seen in Table 4-11, in all cases except Ocean View/ Bayview, Maxi-Taxi's net cost per passenger ($2 to $5 per passenger) is higher than that of the original bus service ($2.27 per passenger). Moreover, while TRT's various service and fare adjustments generally reduced net costs, they also further increased net cost per passenger.

Still another way of addressing the issue of financial performance is to look at revenue/cost recovery ratios for the Maxi-Taxi service in comparison to bus. This index, which is presented in Table 4-12, is perhaps a more familiar financial performance measure to transit operators. The numbers in Table 4-12 represent the percentage of total costs (operating, capital, and administrative) which are covered by farebox revenues. The average recovery ratio for TRT's previous fixed-route bus was 13.9%, compared to a range of 6 to 12% for Maxi-Taxi early in the program to a high of 24.5% in September 1981, and an average in the last 6 months of the demonstration of about 20%. Looking at individual services reveals considerably more variation, ranging from a low of about 1 to 4% for areawide services like Suffolk and College park (which were quickly terminated) to a high of about 30% for the Deep Creek and Ocean View fixed-route replacements. It is worth noting that, except for its Ocean View/ Bayview line, TRT's prior fixed-route bus services (Bowers Hill, Hampton Blvd. and Coronado) returned about 17 to 20% of their costs through the farebox. In the four replacement areas, the

TABLE 4-12. PERCENT OF TOTAL COSTS MET THROUGH FAREBOX REVENUES

Route	Prev.Fixed-Route Bus	Nov 23-Dec '80	Jan '81	Feb '81	Mar '81	Apr '81	May '81	June '81	July '81	Aug '81	Sept '81	Oct '81	Nov '81	Dec '81
Suffolk Rural	N/A	1.2	3.2	1.1	T									
Churchland	N/A	N/A	17.0	16.7	22.6[1]	20.3	20.3	20.2	22.4[a]	23.2	24.2	12.3	14.6	14.5
Bowers Hill	17.2	9.7	21.3	20.8	22.6	20.1	19.7	18.6	22.0[a]	23.7	25.2[2]	20.7	23.9	
Great Bridge	N/A	6.2	11.5	12.7	17.1[1]	17.6	17.1	T						
College Park	N/A	0.8	2.5	3.6	T									
Portsmouth Night	N/A	6.9	11.4	7.4	8.4[3]	9.3	8.2	7.6	19.2[b]	19.3	19.7	11.7	T	
Granby Mall*	N/A	0	0	0	0	T								
Hampton Blvd.	19.4	6.3	9.1	7.0	7.5[1]	7.9	7.0	7.3	13.2[c]	12.2	15.5	16.3[d]	14.1	16.8
Ocean View/Bayview	5.9	10.4	11.3	9.2	7.8	9.6	9.3	11.8	24.1[c]	24.8	27.5[4]	21.7[d]	21.6	21.7
Maxi-Taxi											41.7	24.8	25.0	23.4
Jitney-Ride														
Coronado	19.6	10.5	12.6	14.5	12.1	12.8	15.0	14.2	17.4[e]	11.4	17.1	18.6[d]	17.7	18.8
Deep Creek	N/A	N/A	25.5	24.8	27.9	29.3	28.2	24.7	25.4[a]	24.0	25.2	20.6[d]	21.5	21.3
AVERAGE, ALL SERVICES	**13.9**	**5.8**	**12.9**	**12.6**	**16.0**	**17.2**	**16.6**	**15.9**	**21.5**	**21.2**	**24.5**	**18.3**	**19.9**	**20.4**

T = Service terminated

[1]Service reduced from 2 to 1 van, 3/1/81

[2]Service area expanded, 9/6/81; no increase in vans

[3]Service reduced from 4 to 3 vans, 3/1/81

[4]Service area expanded, vans increased from 2 to 3, 9/6/81

[5]Month of December only

*Granby Mall was offered as a fare-free service, hence, there were no farebox revenues.

[a]Fare increased from $1 to $1.50, 7/5/81

[b]Fare increased from $.50 to $1.50, 7/5/81

[c]Fare increased from $.50 to $1.00, 7/5/81

[d]Average fare reduced; transfer cost for bus riders shifted to bus route of origin

[e]Fare increased from $.50 to $.60, 7/1/81

Maxi-Taxi has not significantly improved cost recovery. On the Ocean View line, where the previous bus was only covering 5.9% of its costs, the Maxi-Taxi has done much better, particularly after July 1981 when the ratio began to exceed 20% with consistency. On the Bowers Hill line, the Maxi-Taxi has also been able to consistently better the previous return ratio of 17.2% with averages above 20%. However, in the Hampton Blvd. and Coronado areas, where the previous bus was covering about 19% of its costs, the Maxi-Taxi replacements have not exceeded this performance.

There are intriguing questions in this tradeoff between total costs saved, cost per passenger served, and cost incidence, which bear upon the issue of mobility and the role of a public transit agency. Data to address these questions have been summarized in Table 4-13, which breaks out the cost and financial performance characteristics of the four project service areas where Maxi-Taxi was substituted for a pre-existing fixed-route bus service. These services include Bowers Hill and Hampton Blvd., both areawide services, and Ocean View and Coronado, which are more corridor-oriented services.

In a direct comparison, Table 4-13 shows the cost of providing service, both total and net of revenue, for both bus and Maxi-Taxi. Looking at these four installations as a representative group, TRT clearly trimmed its costs by switching to Maxi-Taxi. Its total costs fell by 32.5% and its net costs by 38.3%. However, a large number of riders were lost in the transition: 53.1% for this group of services. Moreover, a much larger share of the cost burden was shifted over to users through fares which virtually tripled. To look at the program "from the margin," the shift to Maxi-Taxi saved TRT $1.64 for each former bus rider that was lost. The action raised TRT's net cost per each rider it continued to serve by $.71, or 31%, and for society at large, which supports TRT through tax revenues and through higher fares, the incremental cost per rider served was $1.15, or a 43% increase.

The differences among the individual services are worth examining. The Ocean View Maxi-Taxi is the major exception in

TABLE 4-13. MAXI-TAXI AND CONVENTIONAL (PRE-EXISTING) BUS TRADEOFF ANALYSIS

Service Area		(1) Total Cost Per Month	(2) Monthly Passengers	(3) Revenue	(4) Net Cost Per Month (1)-(3)	(5) TRT's Net Cost per Pass. (4) ÷ (2)	(6) TRT's Net Cost Savings per Passenger Lost (4) ÷ (2)	(7) TRT's Incremental Net Cost per Pass. Served Δ(5)	(8) Average User Cost (Fare) (3)÷(2)	(9) Total Cost Per Passenger (1) ÷ (2)	(10) Incremental Cost to Society Per Rider Served (7) + Δ(8)
Bowers Hill (Areawide Service)	Bus[1]	$4,375	1,586	$754	$3,621	$2.28			$ .48	$2.76	
	Maxi-Taxi[2]	4,268	953	1020	3,248	3.41	$.59	$1.13	1.07	4.48	$1.72
		(-2.4%)	(-39.9%)	(35.3%)	(-10.3%)	(50%)			(123%)	(62%)	
Hampton Blvd. (Areawide Service)	Bus[1]	$8,482	4,696	$1643	$6,839	$1.46			$.35	$1.81	
	Maxi-Taxi[2]	2,310	463	389	1,921	4.15	$1.16	$2.69	.84	4.99	$3.18
		(-72.7%)	(-90.1%)	(-76.3%)	(-71.9%)	(184%)			(140%)	(176%)	
Ocean View (Corridor Service)	Bus[1]	$9,741	1,680	$570	$9,171	$5.46			$.34	$5.80	
	Maxi-Taxi[2]	9,070	2,588	1967	7,103	2.74	N/A	-$2.72	.76	3.50	-$2.30
		(-6.9%)	(54%)	(245%)	(-22.5%)	(-50%)			(124%)	(-40%)	
Coronado (Corridor Service)	Bus[1]	$3,326	1,858	$651	$2,675	$1.44			$.35	$1.79	
	Maxi-Taxi[2]	1,848	600	348	1,500	2.50	$.93	$1.06	.58	3.08	$1.29
		(-44.4%)	(-67.7%)	(-46.5%)	(-43.9%)	(74%)			(66%)	(72%)	
TOTAL	Bus[1]	$25,924	9,820	$3618	$22,306	$2.27			$ .37	$2.65	
	Maxi-Taxi[2]	17,496	4,604	3724	13,772	2.98	$1.64	$.71	1.81	3.80	$1.15
		(-32.5%)	(-53.1%)	(2.9%)	(-38.3%)	(31%)			(119%)	(43%)	

[1]Average for FY80

[2]December 1981

the group in being a successful substitution on virtually every index. Unlike the other substitutions, the Ocean View Maxi-Taxi actually increased ridership (54%) over the previous bus. This ridership increase, combined with a fare increase from $.35 to $1.00 (increase in "average" fare from $.34 to $.76), increased revenue relative to cost significantly, such that TRT's net cost per passenger fell by $2.72, or about 50% below the $5.46 per passenger for the previous bus (which was a group high). By virtue of the improved performance, the cost **savings** passed on to society, after discounting the cost of the $.65 fare increase ($.42 in average fare paid), was $2.30 per rider served.*

In each of the other three cases, the Maxi-Taxi substitution reduced TRT's overall and net costs, but increased its net cost per passenger served and the cost to society per rider served. On Bowers Hill, the substitution of Maxi-Taxi lost 40% of TRT's riders, while lowering TRT's net cost by 10.3%. While each rider lost saved TRT $.59, the net cost per passenger served increased by $1.13, and, due to the $1.00 fare increase ($.59 in average fare paid), increased for society by $1.72. Coronado was a similar situation, with a $1.06 increase in TRT's net cost per passenger served and a $1.29 per passenger increase to society. Hampton Blvd. appears to have been the least effective substitution. This Maxi-Taxi lost over 90% of the previous bus riders, while cutting net cost by 72%. This resulted in an increase in TRT's net cost per passenger served of $2.69, and a total increase to society of $3.18 per passenger served.

Clearly there are issues related to economics and public policy that this tradeoff analysis can only touch upon. At the surface, Maxi-Taxi type contracting services appear to offer an attractive "out" for transit agencies who are struggling to

*Even more effective than the Maxi-Taxi operation in Ocean View was the Jitney-Ride service, also in Ocean View, implemented in September 1981. Jitney-Ride is more comparable to bus in terms of performance, since it also operates in a fixed-route mode. This comparability highlights its performance and cost advantages relative to bus. As seen in Table 4-10, by the end of 1981 Jitney-Ride cost TRT (net cost) $.98 per passenger to operate, compared to $5.46 for the previous fixed-route bus, for an 82% reduction. Total cost per passenger averaged $1.48 for the Jitney and $5.81 for the bus.

maintain or expand service while containing costs. Through the typical service applications studied above, TRT was able to cut its costs to provide service in these four areas; specifically, it saved about $8,500 (net cost) in an average month by switching to Maxi-Taxi, which is about what it previously cost to provide bus service in Ocean View, Hampton Blvd., or Bowers Hill and Coronado combined. With this savings TRT could provide basic mobility services elsewhere in its region where there had been none. However, these substitute services generally increase the per-passenger (net) cost to TRT to provide service, and to society in terms of both TRT's increased costs and higher fares, which are likely to be incident upon a transit dependent population. These represent tradeoffs which must be carefully weighed and considered.

4.5 INSTITUTIONAL AND ADMINISTRATIVE IMPACTS

TRT's experience in the institutional and contracting process for the Maxi-Taxi program is an important output of the study. Both TRT's transit worker's union and the local taxi industry strongly protested the agency's use of contracted shared-ride taxi service. Most of the local taxi firms boycotted the Maxi-Taxi project, viewing it as an infringement of a public agency upon free enterprise. The transit union protested the project (under Section 13(c)) as a threat to their exclusive right to operate TRT's bus service.

Resistance by the taxi industry simply caused TRT to deal with a limited number of competent and willing firms. Resistance from the transit union was handled episodically. During the demonstration planning stage, the union specifically protested Maxi-Taxi replacement for fixed-route bus. TRT overcame this obstacle by funding the replacement services with State funds, which were free of the Section 13(c) labor protection provisions, and used its Federal funds to finance the totally new services. Once the initial resistance was overcome, subsequent innovative applications were less troublesome to implement. However, TRT

astutely waited for situations when it was in a favorable bargaining position with labor to phase-in additional services or prerogatives to its contract.

Following the demonstration, when the original contracts with the private operators came up for renewal, TRT took steps to enhance its operating freedom by developing a "paratransit operator" job category so that it could furnish paratransit services with in-house staff. The union agreed to let TRT develop this job category, which pays $4.50 per hour compared to $9.70 for the regular bus drivers, explicitly to provide paratransit services. The new job category also gives TRT the freedom to make part-time work assignments. Slightly more than half of TRT's paratransit (Maxi-Taxi and Jitney-Ride) services are now being run directly by TRT employees.

Finally, TRT's experience in contracting with private operators conveys important lessons. Maxi-Taxi service contracts were designed to provide maximum control for TRT; TRT was entitled to affect the quality of service provided, or to replace the operator. TRT did not attempt to "run" the service, but stayed well-advised on operations, and offered various directives and inducements to improve the quality of service.

The contract instrument developed by TRT appears to have been sound. Operator costs were reimbursed at a pre-established rate per hour of service furnished, while all revenues were remitted directly to TRT. TRT had difficulty in securing the type and quality of service it desired from the private contractor, but these problems may have been related to incentives. The contractors were reasonably sure of reimbursement for the number of service hours furnished. Their compensation in no way reflected the volume of riders they carried. Hence, the quality of service fell into question. TRT dealt with this problem by maintaining covert observation and warning operators to improve service in the short run. In the longer run, two strategies were employed: (1) ridership thresholds were developed, beyond which the operator could share in the revenue; and (2) TRT used its capability to provide paratransit services with in-house staff as an inducement to the private operators to

provide better service. Cost-wise, TRT is indifferent to providing its Maxi-Taxi or Jitney-Ride services under contract or in-house; it operates three of the five Maxi-Taxi services with in-house staff, and five of the eight jitney services with in-house staff.

5. CONCLUSIONS AND TRANSFERABILITY

TRT's Maxi-Taxi represents an innovative use of the shared-ride taxi concept and public/private service integration to address several problems faced by public transit operators:

- how to maintain basic levels of public transportation service while controlling rising costs of operation;
- how to respond to political pressure to provide transit service to limited transit markets at minimum cost;
- how to interface public and private services in the face of contractual and institutional constraints.

The formal demonstration of Maxi-Taxi in Tidewater encompassed approximately a year, beginning in late November 1980 and running through the end of 1981. Over the course of the demonstration, TRT closely monitored the performance of each Maxi-Taxi service, and made various modifications to try to improve service quality and cost-effectiveness. These modifications provided valuable experience to TRT on planning and operating a relatively untested concept. Most of the services that lasted through the demonstration period have been retained by TRT. TRT continues to experiment with these and other variations of shared-ride taxi, including jitney services, under its policy to maintain or expand public transportation service to its region while controlling operating costs.

Tidewater's Maxi-Taxi experience has produced results that pose interesting questions to transit operators and policy makers. TRT's project has demonstrated that a transit operator can provide certain types of transit service at lower cost--both total cost (including fares) and **net** cost (excluding fares)--through use of shared-ride taxi services. The cost of TRT's Maxi-Taxi service averaged between $13 and $15 per hour (inclusive of operating, capital and administrative costs), compared to about $30 per hour for TRT's conventional bus service. Hence, Maxi-Taxi represents a lower-cost option to TRT when faced with

the obligation of maintaining transit service in low-ridership areas or providing new transit service in low-density areas.

Using Maxi-Taxi as a transit substitute carries with it various economic and social tradeoffs. If all four of TRT's Maxi-Taxi replacement services are taken together as a representative group, they would show that TRT was able to cut its total monthly cost for service to these areas by $8,428, or 32.5%. However, higher fares (average of $.44 higher) and differences in level of service caused a 53.1% loss in ridership. At an average fare of $.37, 9,820 persons were willing to ride the bus per month; at an average fare of $.81, only 4,604 persons per month were willing to ride Maxi-Taxi. The level of increase in fares offset the loss in ridership, however, which resulted in a slight increase (2.9%) in total revenue, and a slightly greater reduction in net costs (38.3%) compared to total costs.

The cost relationships and ridership impacts associated with the changeover from bus to Maxi-Taxi pose interesting tradeoffs. The four Maxi-Taxi replacements saved TRT $8,534 per month in net costs over the previous operation. However, 5,216 riders were no longer served, and those who were served realized an additional $.44 cost (on average) per ride. On one hand, it can be argued that users are paying a higher proportion of the costs of providing service; on the other hand, these users are typically economically disadvantaged, and higher fares mean reduced mobility. For TRT, the loss of 5,216 riders translated to a net cost savings of $1.64 per rider no longer served. However, at the same time, the net cost per rider which it continued to serve with Maxi-Taxi also increased, by $.71, compared to the previous bus. So to society, whose taxpayers must cover TRT's unmet costs and whose riders must pay higher fares, the cost to transport riders with Maxi-Taxi increased by $1.15 per rider. Each of these factors must be considered in deciding whether Maxi-Taxi is an effective substitute for conventional public transit.

Overall, TRT's most successful shared-ride taxi application was its Willoughby Jitney-Ride, located in the Ocean View district. The jitney service operated as a fixed-route service on Willoughby Blvd., providing high frequency service with a

minibus vehicle at a fare of $.50. In December 1981 this service carried 1,450 passengers at a net cost of $1,427 per month, or $.98 per passenger. This compares to 1,680 passengers at a net cost of $9,171, or $5.46 per passenger, with the previous fixed-route bus. TRT has been sufficiently impressed with the service, usage, and cost recovery characteristics of the Jitney-Ride that it has significantly expanded its use of this type of service since the close of the demonstration. Because of its cost and flexibility, TRT is using jitney as its only service in particular service areas, and as a supplement for bus in others, either to improve level of service in mixed use with bus on the same route, or to improve peak-period capacity as a tripper operation.

The general rule seems to be that if a market is good for bus it will also be good for Maxi-Taxi, i.e., Maxi-Taxi also does better in higher density markets. Conversely, if the market is poor for bus, it will also be poor for Maxi-Taxi. However, in these low ridership markets, Maxi-Taxi's principal value is that it allows the transit agency to provide service at less overall cost. For an equivalent dollar outlay, the Maxi-Taxi will probably provide less service; ridership will be less and the cost **per passenger** higher than bus. It should be noted, however, that for applications where Maxi-Taxi is used as the least cost response to providing basic transportation service, that it will serve the most dependent segment of the travel market, i.e., those without alternatives, and it will supply the travelers with doorstep service.

Without formal planning or operational models at its disposal, TRT's experience with Maxi-Taxi was largely experimental. Applications were selected which appeared to be logical for this type of service--new service in low density/rural areas, and replacement service for existing bus routes with poor financial performance. Services were laid out simply, consisting of a service area with designated transfer points; however, except for the Coronado and Portsmouth fixed-route substitution services, and the Suffolk rural service (which allowed users to meet the vehicle at specified intersections), most Maxi-Taxi services were

not assigned scheduled service routes. Most services were designed to converge on a central node or bus transfer point at a specific time, and users were obliged to adapt their schedules to this overall cycle. However, the actual travel path of the vehicle was based on the time and location of residents' trip requests. TRT subsequently managed the service by monitoring performance in terms of ridership and cost recovery. Services were modified by adding or removing vehicles, changing operating hours, or increasing fares. The principal strategies used to combat rising deficits were cutting service and raising fares. In all cases, this remedy lowered total net cost for the service area but had a more than proportionate effect on ridership, so that the total cost **per passenger**, and even the net cost **per passenger**, was increased by the change.

The experience gained by TRT with contracting procedures was an important component of the demonstration. TRT overcame the resistance of both organized transit labor and the local taxi industry. Most of the local taxi firms viewed the Maxi-Taxi program as a threat to free enterprise, and felt that such an association with TRT would undercut their regular business. TRT mitigated this problem by dealing with those firms who were competent and willing. The contract services were developed in a learn-as-you-go manner. Contracts were set up to be periodically reviewed and renewed, and were flexible enough to allow TRT or its contractor to terminate the service agreement within a short time if it was convenient to do so. TRT did not attempt to run the services, but stayed well enough advised on their operation to offer advice on service improvements.

TRT dealt with the resistance from its labor union in several ways. In the short run, it financed its Maxi-Taxi fixed-route replacement services with state funds, which were not subject to Section 13(c) labor provisions. Later, during the course of the demonstration, the union changed its stance on the Maxi-Taxi program and agreed to let TRT develop a "paratransit" job category. This agreement allows TRT to hire paratransit operators at less than half the regular operator's rate. With this capability, TRT now provides about half of its Maxi-Taxi and

Jitney-Ride services with in-house staff, with the remainder supplied by contractors. This freedom to contract or supply service in-house gives TRT important cost and management control over both the private contractors and the regular bus operation and workforce.

The Maxi-Taxi service concept has much promise as a remedy for public transportation agencies to problems with rising costs and declining budgets. Much can be learned from the successes and failures of the Tidewater Maxi-Taxi experience.

APPENDIX A

REQUEST FOR BIDS AND

SERVICE CONTRACT

Maxi-Taxi Services
Request for Bids

The Tidewater Transportation District Commission (TTDC) is responsible for the development and provision of public transportation services in the Tidewater area. One element of the transportation program is shared-ride or "Maxi-Taxi" services.

Maxi-Taxi is a family of services using small vehicles, such as taxi cabs and vans, to provide both demand responsive and fixed-route service. It may be door-to-door within a fixed area or may operate along a specified corridor.

TTDC purchases some of these shared-ride services from local transportation providers such as taxi-cab companies. This request solicits bids to operate vehicles in Maxi-Taxi services as described in the attachment. As a minimum, each proposal must give the following information:

1. Name, business address, telephone and principal contact of the firm;
2. Experience of the firm in providing similar flexible services;
3. Capability of the firm to provide the necessary dispatching, drivers and vehicles;
4. Familiarity with the service area;
5. The bid cost per vehicle per hour of operation. This cost must be firm for six months.
6. The vehicle hours and miles of operation per day;
7. Number of vans, 12 or 15 passenger, to be leased from TTDC to provide the service.

All fare revenues charged to riders will belong to TTDC. It is the responsibility of the service provider to insure that the appropriate fares are collected, secured and given to TTDC. TTDC will provide tickets, transfers and fareboxes as may be necessary for fare collection.

The service provider will invoice TTDC monthly for services provided. Ridership statistics, similar to a taxicab manifest, must be supplied with the invoice. The

provider will be responsible for the accuracy and security of fare collection and statistical reporting. As this is an experimental program, supplemental, periodic reports may be required.

TTDC will be responsible for the planning, marketing and coordination of Maxi-Taxi services in cooperation with the service providers. TTDC will provide all promotional materials; however, the provider is expected to promote Maxi-Taxi to help assure its success. All other services, facilities and equipment necessary to provide Maxi-Taxi, including radio and telephone communication, are the responsibility of the provider.

Proposals must be submitted by October 16, 1980. Service will be implemented November 23, 1980.

Bid Item I: Chesapeake and Portsmouth

The five services in this bid item will be operated under one contract. All services operate similar to the existing Maxi-Taxi service in Deep Creek and Churchland, for which brochures are attached as information.

Our experience indicates that vans with a capacity of twelve to fiteen passengers supplemented with cabs or station wagons at peak demand times will be required to operate this service economically. TTDC has twelve and fifteen passenger vans available to lease. The lease includes the cost of the van, maintenance and back-up, but not insurance. If the bidder wishes to lease vans from TTDC, the lessee must purchase liability insurance, naming TTDC as additional insured, of not less than $500,000 per person and per occurence. The lease price of the vans are as follows:

Type of Van	Price Per Vehicle Mile
1980 12-passenger van	20¢
1980 15 passenger van	24¢

I-a. High Street Corridor, Portsmouth

On-call service approximately every 30 minutes in the service area shown on attached map. It is estimated two vans will be required. Service hours will be 7:00 PM - 10:30 PM Monday thru Saturday. Regular bus fares will be charged.

I-b. Route #45 Corridor, Portsmouth

On-call service approximately every 30 minutes in the service area shown on attached map. It is estimated that two vans will be required. Service hours will be 7:00 PM - 10:30 PM Monday thru Saturday. Regular bus fares will be charged.

I-c. Churchland/Pughsville/Huntersville, Chesapeake, Suffolk, Portsmouth

On-call service approximately every 50 minutes in the service area shown on map and to meet all trips on TRT Route #47 at Churchland Shopping Center. It is estimated that two vans will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

I-d. Bowers Hill, Chesapeake

On-call service approximately every 60 minutes in the service area shown on attached map and to Tower Mall to connect with bus service. It is estimated that one van will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

I-e. Deep Creek, Chesapeake

On-call service approximately every 60 minutes in the service area shown on attached brochure and to Tower Mall to connect with bus service. It is estimated that one van will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

Bid Item II: Norfolk

Two of these Maxi-Taxi services operate in the demand-responsive, door-to-door mode and one is a fixed-route jitney. The three services in this bid item will be operated under one contract. Vans may be leased from TTDC on the same basis as outlined under Item I.

II-a. Hampton Blvd./Colonial Avenue Corridor, Norfolk

On-call service approximately every 30 minutes in the area shown on attached map and to connect with bus service at Norfolk General Hospital. It is estimated that two vans will be required. Service hours will be from 7:00 PM - 12:00 AM daily. Regular bus fare will be charged.

II-b. Oceanview/Bayview, Norfolk

On-call service approximately every 60 minutes in the area shown on attached map and to Southern Shopping Center and the City Multi-Purpose Center. It is estimated that one van will be required. Service hours will be from 8:00 AM - 6:00 PM daily. Regular bus fare will be charged.

II-c. Coronado, Norfolk

Corridor jitney service along the Route #16 Coronado bus route approximately every 60 minutes, according to attached timetable. One van will be required. Service hours will be from 9:00 PM - 1:00 AM daily. Regular bus fare will be charged.

Bid Item III: Chesapeake

The two services in this bid item will be operated under one contract and are of the demand responsive type. Vans may be leased from TTDC as in Item I.

III-a. Great Bridge, Chesapeake

On-call service approximately every 60 minutes within the service area shown on map and to connect with regular bus service at the Civic Center. It is estimated that one van will be required. Service hours will be from 8:00 AM - 5:30 PM Monday thru Saturday. The fare is $1 per one-way trip.

III-b. Greenbrier, Chesapeake

On-call service approximately every 60 minutes within the service area shown on map and to the Great Bridge Civic Center. It is estimated that one van will be required. Service hours will be from 8:00 AM - 5:30 PM Monday thru Saturday. The fare is $1 per one-way trip.

Bid Item IV: Virginia Beach

The following service is the demand responsive type. Vans may be leased from TTDC as in Item I.

College Park, Virginia Beach, Chesapeake

On-call service approximately every 60 minutes within the service area shown on map and to connect with the Route #15 Crosstown bus route at College Park Shopping Center. It is estimated that one van will be required. Service hours will be from 6:00 AM - 10:00 PM. Monday thru Saturday. The fare is $1 per one-way trip.

TIDEWATER TRANSPORTATION DISTRICT COMMISSION

Proposal

TO: Tidewater Transportation District Commission
P. O. Box 660
Norfolk, Virginia 23501

The undersigned hereby agrees to furnish the shared-ride transportation services as listed below in accordance with the specifications of the Tidewater Transportation District Commission which have been carefully examined and which are attached hereto.

Description of Service	Vehicle Hours Per Day	Price Per Vehicle Hour
Item I: Chesapeake & Portsmouth	----------	----------
Item II: Norfolk	----------	----------
Item III: Chesapeake	----------	----------
Item IV: Virginia Beach	----------	----------

The undersigned understands that any condition stated above, clarification made to the above, or information submitted on or with this form other than that requested could render this bid unresponsive.

_____
Name of Individual, Partner or Corporation

_____
Address

_____
Authorized Signature

_____
Title

AGREEMENT FOR PURCHASE OF MAXI-TAXI SERVICES

THIS AGREEMENT entered into this 21st day of November, 1980 by and between the Tidewater Transportation District Commission, hereinafter referred to as the "TTDC" and Yellow Cab of Chesapeake, hereinafter referred to as "Contractor".

W I T N E S S E T H

WHEREAS, TTDC is responsible for preparing the transportation plan for the Tidewater Transportation District pursuant to Section 15.1-1357 (a) (1), Code of Virginia; and

WHEREAS, the transportation plan for the District includes the provision of shared-ride taxi (Maxi-Taxi) services; and

WHEREAS, the TTDC is authorized by Section 15.1-1357(a) (2) and (3) of the Code to provide such services; and

WHEREAS, Contractor has established itself as a qualified provider of shared-ride taxi services.

WHEREAS, TTDC desires to contract with Contractor for the provision of shared-ride taxi services.

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. Services to be Provided.

(a) Contractor, as an independent contractor and not as an employee or agent, will provide group riding or shared-ride transportation services (sometimes referred to as "Maxi-Taxi" services) within the Tidewater Transportation District as set forth in Schedule "A", attached to this Agreement and by this reference incorporated herein.

(b) Contractor will provide all services, facilities and equipment, including without limitation properly licensed and maintained vehicles, two-way radio communications equipment, properly licensed and qualified drivers, dispatching, telephone communications etc., necessary to provide the Maxi-Taxi services as described in Schedule "A", except that TTDC will provide tickets, transfers, and fare boxes as may be necessary for fare collection.

(c) TTDC is responsible for planning, marketing and coordination of Maxi-Taxi services, and Contractor will cooperate with TTDC in performing these functions.

2. Fares.

(a) All fare revenues collected from Maxi-Taxi riders belong to TTDC. Contractor will ensure that the appropriate fares are collected and secured in the fareboxes. TTDC will remove the fares from the fareboxes.

(b) Special Maxi-Taxi tickets may be obtained from TTDC on consignment by Contractor for those services where they are required. Contractor will ensure that one ticket is collected and returned to TTDC for each one way rider.

(c) For Maxi-Taxi services where regular bus fares are charged, Contractor will ensure that the proper fare in cash, transfer, ticket or pass is obtained. All cash and tickets must be deposited in the farebox.

3. Cost.

(a) TTDC agrees to pay Contractor at the following rate: $14 per vehicle hour.

(b) Contractor will invoice TTDC monthly for all services provided the preceeding month. The invoice will include the following items.

1. Number of days of operation

2. Vehicle hours per day

3. Total vehicle hours of operation

4. Cost per vehicle hour

5. Total cost

6. Total vehicle miles of operation

7. Total ridership

(c) Ridership information similar to a taxicab manifest must be supplied with the invoice. The contractor is responsible for the accuracy and security of fare collection and statistical reporting. TTDC may require reasonable supplemental reports and conduct periodic surveys of Maxi-Taxi riders.

4. Independent Contractor. Contractor represents that it is an independent contractor, retaining the right and responsibility to exercise full control and supervision

over its employees, including compliance with social security, withholding, workmen's compensation, unemployment, and all other rules and regulations for its own acts and those of its employees and agents during the term of this Agreement.

5. Audit and Inspection of Records. Contractor shall permit authorized representatives of the TTDC, the Virginia Department of Highways and Transportation, and the U.S. Department of Transportation and the Comptroller General of the United States to inspect and audit all data and records of Contractor relating to its performance under the contract.

6. Interest of Members of or Delegates to Congress. No member of or delegate to the Congress of the United States shall be admitted to any share or part of this contract or to any benefit arising therefrom.

7. Equal Employment Opportunity. In connection with the execution of this contract, Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during their employment without regard to race, religion,

color, sex or national origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or advertising, layoff, or termination; rates of pay, or other forms of compensation; and selection of training, including apprenticeship.

8. Minority Business Enterprise. In connection with the performance of this Agreement, Contractor will cooperate with TTDC in meeting its commitments and goals with regard to the maximum utilization of minority business enterprise and will use its best efforts to insure that minority business enterprise shall have the maximum practicable opportunity to compete for sub-contract work under this Agreement.

9. Virginia Fair Employment Act. The Contractor shall comply with the provisions of the Virginia Fair Employment Contracting Act (§ 2.1-374 through § 2.1-376 of the Code of Virginia (1950), as amended), the terms of which are incorporated herein by reference.

10. Compliance with Title VI of the Civil Rights Act of 1964. The Contractor shall comply with the provisions of Title VI of the Civil Rights Act of 1964.

11. Term of Agreement. This Agreement shall become effective November 23, 1980 and shall expire on May 31, 1981 provided, however that the Agreement may be terminated at any time by either party by providing the other party thirty (30) days written notice of termination.

12. Miscellaneous.

(a) General

(i) shall be binding on the parties hereto, their successors and assigns, provided, however, that the Contractor may not assign its interest in this Agreement without prior written consent of TTDC.

(ii) shall be governed by and construed in accordance with the laws of the State of Virginia; and

(iii) may be executed in counterparts with the same effect as if the parties executing such counterparts had all executed one counterpart as of the day and year first above written.

(b) Amendment of this Agreement. The terms and conditions of this Agreement may be modified or amended at any time and from time to time only with the written consent of the parties.

(c) Notices. Each notice relating to this Agreement shall be in writing and delivered in person or by registered or certified mail. All notices to the Commission shall be addressed to the Executive Director, Tidewater Transportation District Commission, 509 East 18th Street, P. O. Box 660, Norfolk, Virginia 23501. All notices to Contractor shall be addressed to Yellow Cab of Chesapeake, Inc., 533 E. Little Creek Rd., Norfolk, VA 23505 Any party may designate a new address by notice to that effect given to the other party. Unless otherwise specifically provided in this Agreement a notice shall be deemed to have been effectively given when mailed by registered or certified mail to the proper address or delivered in person.

(d) This Instrument. This instrument and the documents expressly described or referred to herein constitute all of the understandings and agreements of whatsoever kind and nature that exist between the parties hereto with respect to this Agreement. No failure of either party to exercise any rights given by this Agreement or to insist upon compliance by the other party of any obligation hereunder shall constitute a waiver of either party's

right to demand exact compliance with the terms hereof.

(e) Invalid Provisions to Affect No Others. In the event that any of the covenants, terms or provisions contained in this Agreement shall be invalid, illegal or unenforceable in any respect, the validity of the remaining covenants, agreements, terms or provisions contained herein will in no way be affected, prejudiced or disturbed.

13. Indemnification and Insurance.

(a) Contractor will hold TTDC harmless from all loss and damage (including reasonable attorney's fees and costs in defending claims) TTDC may sustain or suffer by reason of the death or injury to the person or property of any third person arising out of or connected with the provisions of Maxi-Taxi services by Contractor.

(b) Contractor will procure and maintain, at its expense a policy or policies of public liability insurance in the form of a standard automobile insurance policy for public carriers issued by a company satisfactory to TTDC with premiums prepaid, insuring TTDC against risks and hazards noted in (a) above in the minimum amounts of $500,000.00 as to any one person,

and $500,000.00 as to any one accident, and property damage insurance in the amount of $500,000.00 as to each accident. The policy or policies of insurance will name TTDC as an additional insured, will be delivered to TTDC prior to the execution of this Agreement, and will carry an endorsement by the insurer either upon the policy or policies issued by it or by an independent instrument that TTDC will receive 30 days prior written notice of the effective date of any alteration or cancellation of the policy or policies.

IN WITNESS WHEREOF, the Tidewater Transportation District Commission has caused this Agreement to be executed by its Executive Director, and Contractor has caused this Agreement to be executed by its President and Secretary, and its corporate seal to be affixed hereto.

TIDEWATER TRANSPORTATION DISTRICT COMMISSION

By James C. Echols
Executive Director

By Arthur Miller
President

ATTEST:

Secretary

ATTACHMENT A

Bid Item I: Chesapeake and Portsmouth

I-a. High Street Corridor, Portsmouth

On-call service approximately every 30 minutes in the service area shown on attached map. It is estimated two vans will be required. Service hours will be 7:00 PM - 10:30 PM Monday thru Saturday. Regular bus fares will be charged.

I-b. Route #45 Corridor, Portsmouth

On-call service approximately every 30 minutes in the service area shown on attached map. It is estimated that two vans will be required. Service hours will be 7:00 PM - 10:30 PM Monday thru Saturday. Regular bus fares will be charged.

I-c. Churchland/Pughsville/Huntersville, Chesapeake, Suffolk, Portsmouth

On-call service approximately every 50 minutes in the service area shown on map and to meet all trips on TRT Route #47 at Churchland Shopping Center. It is estimated that two vans will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

I-d. Bowers Hill, Chesapeake

On-call service approximately every 60 minutes in the service area shown on attached map and to Tower Mall to connect with bus service. It is estimated

that one van will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

I-e. Deep Creek, Chesapeake

On-call service approximately every 60 minutes in the service area shown on attached brochure and to Tower Mall to connect with bus service. It is estimated that one van will be required. Service hours will be 6:00 AM - 7:00 PM Monday thru Saturday. The fare is $1 per one-way trip.

Bid Item II: Norfolk

II-a. Hampton Blvd./Colonial Avenue Corridor, Norfolk

On-call service approximately every 30 minutes in the area shown on attached map and to connect with bus service at Norfolk General Hospital. It is estimated that two vans will be required. Service hours will be from 7:00 PM - 12:00 AM daily. Regular bus fare will be charged.

II-b. Oceanview/Bayview, Norfolk

On-call service approximately every 60 minutes in the area shown on attached map and to Southern Shopping Center and the City Multi-Purpose Center. It is estimated that one van will be required.

Service hours will be from 8:00 AM - 6:00 PM daily. Regular bus fare will be charged.

II-c. Coronado, Norfolk

Corridor jitney service along the Route #16 Coronado bus route approximately every 60 minutes, according to attached timetable. One van will be required. Service hours will be from 9:00 PM - 1:00 AM daily. Regular bus fare will be charged.

Bid Item III: Chesapeake

III-a. Great Bridge, Chesapeake

On-call service approximately every 60 minutes within the service area shown on map and to connect with regular bus service at the Civic Center. It is estimated that one van will be required. Service hours will be from 8:00 AM - 5:30 PM Monday thru Saturday. The fare is $1 per one-way trip.

III-b. Greenbrier, Chesapeake

On-call service approximately every 60 minutes within the service area shown on map and to the Great Bridge Civic Center. It is estimated that one van will be required. Service hours will be

APPENDIX B

PROTEST STATEMENTS

OF ORGANIZED LABOR AND

TAXI INDUSTRY

LAW OFFICES OF

HOWELL, ANNINOS, DAUGHERTY & BROWN

SUITE 808 MARITIME TOWER, NORFOLK, VIRGINIA 23510

TELEPHONE (804) 623-7334

HENRY E. HOWELL, JR.
AUGUSTUS ANNINOS
GUY E. DAUGHERTY
ROBERT E. BROWN
J. GRAY LAWRENCE, JR.

LOWELL A. STANLEY
ROBERT B. ROMM

August 13, 1980

Mr. Michael D. Kidd
State Public Transportation Coordinator
Virginia Department of Highways and Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mr. Kidd:

Re: State Aid For Experimental
Ridesharing Projects - TTDC

We forward herewith Statement Of Amalgamated Transit Union, Division 1177, In Opposition To An Experimental Ridesharing Project which was proposed to you by Mr. James C. Echols, Executive Director of Tidewater Transportation District Commission in his letter of transmittal dated June 20, 1980.

By sending a copy of this letter to Mr. Echols and to Mr. John R.Sears, Chairman of the Tidewater Transportation District Commission and to Reverend Joseph N. Green, a Norfolk Member of the Commission, we are requesting that Mr. Echols see that a copy of this statement is furnished to all other Members of the Commission.

With kind regards, we are

Very truly yours,

HOWELL, ANNINOS, DAUGHERTY & BROWN,

By:

Henry E. Howell, Jr.

H:c
cc:- Mr. James C.Echols
509 E. 18th Street
Norfolk, Virginia 23504

Reverend Joseph N. Green, Jr.
P. O. Box 1003
Norfolk, Virginia 23501

STATEMENT OF AMALGAMATED TRANSIT UNION, DIVISION 1177, IN OPPOSITION TO THE REMOVAL OF BUSES FROM EXISTING FIXED ROUTES AND SUBSTITUTION OF TAXI SERVICE THEREFOR.

As the attorney for Division 1177 of Amalgamated Transit Union, I submit the following statement in opposition tothe proposal of the Tidewater Tansportation District Commission to terminate existing regular bus service on what is described in Items 7, 8 and 3 on the proposed Virginia Department of Highways and Transportation Experimental Ridesharing Project.

The Union objects to the inadequacy of notice and information that has been furnished the public and the Union regarding the specifics of the effect that these proposals will have on existing regular bus service.

Administrative due process of law requires that adequate notice be afforded the public before termination of existing service.

Secondly, the City of Norfolk and the Tidewater Transportation District Commission has received millions of dollars in grants under the Urban Mass Transportation Act. This Act was passed by Congress when it was determined that private enterprise could not afford to furnish mass transportation in urban areas and there was a need for the services to be subsidized. The millions of dollars that have been granted to Norfolk and the Commission contemplated that regular bus service would be afforded to the citizens of Norfolk, notwithstanding that the service produced a loss.

It is respectfully submitted that the private management company the Commission has contracted with to carry out the Commission's obligations to the public is more motivated by profit than by the policy of the Urban Mass Transportation Act to maintain bus service in urban areas.

The second area that is affected by this proposal is described as Item 8 on the Experimental Ridesharing Project that is before the Commission.

Again, the description of the service affected is not very clear. It merely states:

"Ocean View/Bayview/ Coronado, Norfolk	Two Maxi-Taxis operating between 6:00 a.m. - 12:00 a.m. daily to Southern Shopping Center and a city multi-purpose center. Expanded collection and distribution to TRT bus routes #8 and #15."

Each of the areas mentioned in Item 8 is densely populated and it is contemplated to substitute taxis for bus service.

The proposal outlined in a memorandum dated June 5, 1980, addressed to the Chairman and Members of the Tidewater Transportation District Commission by James C. Echols, Executive Director, stated that the experimental taxi service was being proposed in view of the fact that:

> "*** an experimental pedestrian ferry service has been found not to be feasible at this time, and an alternative ride-sharing program has been proposed."

It is submitted that there is no relation between the curtailment of services and the institution of taxi service in certain areas of Norfolk and the previously suggested

experimental ferry service.

It would appear that since the State was considering making a contribution to an experimental ferry service and now that that cannot be done, this is merely an effort to use money that had been proposed for an entirely different project without justification for the substitution.

It will be further noted from the third paragraph of the memorandum of June 8, 1980, that the proposed taxi service is to be coordinated with a grant that is to be provided through a National Ridesharing Demonstration Program.

The Union has been advised that the grant through the National Ridesharing Demonstration Program was conditioned on an agreement between Mr. Echols, as Executive Director of the Commission, and Division 1177 that the use of vans under the Ridesharing Demonstration Program would not result in the elimination of regular bus service or the loss of bus operators' jobs.

Division 1177 calls to the attention of the Chairman and the Commissioners of Tidewater Transportation District Commission the introduction statement that supports the application for State aid for the Shared Ride Taxi Service:

> "The objective of this project is to provide an alternative mode of public transportation, at less cost to the rider and the transit operator, in low and medium density areas where regular bus route transportation is not economically feasible. ***"

It is submitted that the Hampton Boulevard/Colonial Avenue/ Corridor areas are densely occupied urban areas as are the Ocean View/Bayview/Coronado areas. If low density is a prerequisite to eligiblity for these State funds, these two

areas in Norfolk would not qualify, and certainly, Downtown Norfolk would not qualify.

Item 3 of the application for State Experimental Ride Sharing Funds, the Downton Norfolk area, is adequately served at the present time by buses, and certainly one taxi or van would not be a cost justified expenditure in Downtown Norfolk.

For the above reasons, it is submitted that the experimental taxi service proposed in Item 3 "Downtown Norfolk", Item 7 "Hampton Boulevard/Colonial Ave. Corridor, Norfolk" and Item 8 "Ocean View/Bayview/Coronado, Norfolk" should be denied.

AMALGAMATED TRANSIT UNION, DIVISION 1177,

By: Henry E. Howell Jr.
Of Counsel

Henry E. Howell, Jr.
Howell, Anninos, Daugherty & Brown
808 Maritime Tower
Norfolk, Virginia 23510
(804) 623-7334
Counsel for Amalgamated Transit Union,
Division 1177.

TELEPHONE 489-7777

BLACK & WHITE CARS, Inc.

TILLER'S CABS

830 W. 39TH STREET NORFOLK, VA. 23508

November 20, 1980

Virginia Department of Highways and Transportation
1401 E Broad Street
Richmond, Virginia 23219

Attention: Michael D. Kidd - Coordinator

Dear Mr. Kidd,

Re: T. R. T.

Exhibit 1. As free enterprise I resent State giving T.R.T. $ 209,000.00 for another administrative office.

Exhibit 2. T. R. T. has low grade, cannot run bus company efficiently, yet want to run taxi companies.

Exhibit 3. Another loser, will be operating Maxi-Taxi, from another city of Chesapeake in City of Norfolk.

Socialism will destroy the American way of life, if it keeps penetrating in business. We are in situation where nothing works, nobody knows what to do, where drift rules.

Americans have always regarded loss of control as intolerable. and last few years of wrenching change have intensified.

Yours Sincerely,

Louis M. Oden

Louis M. Oden

APPENDIX C

SAMPLE OF

COVERT SERVICE EVALUATIONS

MAXI-TAXI OBSERVERS REPORT

ORIGIN: 11th Bay and East Ocean View Ave.

DESTINATION: Wards Corner to Peoples Drug Store

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Bayview/Oceanview Maxi-Taxi

OPERATOR: White Female

VEHICLE # V-118

APPEARANCE: Clean

ON SCHEDULE: yes

On Wednesday, March 18, 1981, I caught the Bayview - Oceanview Maxi-Taxi at 11th Bay and East Ocean View Avenue. I called for it about 3 or 4 minutes till 1:00 p.m. The taxi arrived about 1:05 p.m., Van #118, driven by a white female about 5' 5", 135 lbs. with dark brown hair, she was clean but not very neat. (flannel shirt and jeans).

When I got on the taxi, there was one passenger already on the van. The driver had a friend with her sitting in the front passenger seat for company.

I asked the fare and she told me it was .50 so I put it in the fare box and was taken to Wards Corner to the Peoples Drug store. She drove the van very well and observed all traffic signs.

L. Brown

MAXI-TAXI OPERATORS REPORT

ORIGIN: Multi-Service Center on Little Creek Rd.

DESTINATION: Ocean View Station

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Bayview/Oceanview Maxi-Taxi

OPERATOR: White Female

VEHICLE # V-118

APPEARANCE: Clean

ON SCHEDULE: yes

The driver of this taxi had a friend riding with her to keep her company. They both were eating and drinking, the driver was doing so while driving the taxi. She was not at all very courteous to the passengers.

D. Whitehurst

MAXI-TAXI OPERATORS REPORT

ORIGIN: Portsmouth/Chesapeake Airport

DESTINATION: Tower Mall

DATE: March 18,1981

DAY: Wednesday

ROUTE: Bowers Hill Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-117

APPEARANCE: Neat

ON SCHEDULE: No

I arrived at the Chesapeake-Portsmouth Airport at 12:50 p.m. I called for a taxi when I got there. The dispatcher said the driver was on her lunch break and would be back in 10 minutes. I waited for 40 minutes and called back. The dispatcher said the driver said, that the airport was not on her route. I told the dispatcher that it was because it was on the map, so the dispatcher got in touch with the driver, at this time she was in Bowers Hill and would pick me up. She got there at 2:10 p.m.

I got into the van and spoke to the driver, but she did not say anything. When I reached to put my dollar in the fare box, she held out her hand and said that she would take it. She put the dollar in her pocket and tore half of the ticket and gave it back to me. She put the other half in her pocket. I was the only one in the van that was making the trip to Tower Mall. She acted upset about something, but drove very carefully.

R. Rodman

MAXI-TAXI OPERATORS REPORT

ORIGIN: Tower Mall Shopping Center

DESTINATION: Bowers Hill

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Bowers Hill Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-117

APPEARANCE: Neat

ON SCHEDULE: No

According to the booklet the taxi is suppose to arrive every hour on the hour, but the van got to Tower Mall at 2:30 p.m. Once we got started on our route the driver had to turn around and go to Fink's Gas Station to gas up. After she had gassed up she did not go the route but down Greenwood Drive, instead. She was courteous to her passengers, she even had a lady to ride with her to Bowers Hill and then back to Deep Creek. The lady had not given the driver her fare when we reached my destination. The service is a little better than the supposed to be night service.

D. Helton

MAXI-TAXI OPERATORS REPORT

ORIGIN: Churchland Shopping Center

DESTINATION: Tidewater Community College

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Churchland Maxi-Taxi

OPERATOR: Black Female

VEHICLE: V-116

APPEARANCE: Neat

ON SCHEDULE: yes

The driver told me that she could not take me from the Churchland Shopping Center to Tidewater Community College. The driver was a black female, which was neat in appearance. The van number was #116, and was on schedule.

R. Rodman

MAXI-TAXI OPERATORS REPORT

ORIGIN: Plaza Shopping Center

DESTINATION: Tidewater Community College

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Churchland Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-116

APPEARANCE: Neat

ON SCHEDULE: yes

The driver of the van told me, when asked that she could not take me from the Plaza Shopping Center to TCC, but the booklet that is printed on the Churchland Maxi-Taxi says that she can. If the driver is correct then you need to change your booklet if not then the driver needs to be told that she can take passengers to TCC from the shopping center. I know that we have a bus that comes by the shopping center and goes to the college but the point is that you are contradicting yourself. There are alot of bugs that need to be worked out.

D. Helton

MAXI-TAXI OPERATORS REPORT

DATE: March 24, 1981

DAY: Tuesday

WEATHER: Cool/Windy

ROUTE: Coronado Maxi-Taxi

BOARDED: (9:35 p.m.) Johnston Rd. - Sewells Point Rd.

ALIGHTED: (10:09 p.m.) Monticello Ave. - Bute Street

VEHICLE # V-108

OPERATOR: Erma

An analysis of this route was taken on Tuesday, March 24, 1981. The taxi operator followed the guidelines as indicated. She demonstrated a high degree of professionalism in operating the Maxi-Taxi.

Erma was given and overall grade of "Good" for her driving ability. Erma works full-time for ARA Transportation (School Bus System) where she has been employed since 1977.

B. McIntosh
Senior Transportation Surveyor

MAXI-TAXI OPERATORS REPORT

ORIGIN: Downtown at Monticello and Bute Street

DESTINATION: Johnston Road and Sewells Point Road

DATE: March 24, 1981

DAY: Tuesday

ROUTE: Coronado Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-108

APPEARANCE: Neat

ON SCHEDULE: yes

This driver keeps a very good schedule. She collected proper fares, and was exceptionally courteous to all her passengers. She was a very safe driver also.

This driver had just been trained on Monday, 3-23-81, she did very well, did not go off her route one time. She told another passenger that she worked for ARA during the day.

M. Thompson

MAXI-TAXI OPERATORS REPORT

ORIGIN: George Washington Highway

DESTINATION: Tower Mall Shopping Center

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Deep Creek Maxi-Taxi

OPERATOR: Mr. Wright

VEHICLE # V-110

APPEARANCE: Neat

ON SCHEDULE: yes

I called for the Maxi-Taxi at 12:00 p.m. at George Washington Hwy. and Gilmerton Street. The taxi came at 12:20 p.m. The driver of this taxi was very courteous to his passengers. I do not know if he collected proper fares or not, all of his passengers, except one paid as they got off the taxi, if they paid at all. There was one passenger that said he would have to go in the house and get his money, once he was home.

M. Thompson

MAXI-TAXI OPERATORS REPORT

ORIGIN: Tower Mall Shopping Center

DESTINATION: Deep Creek to Gilmerton Shopping Center

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Deep Creek Maxi-Taxi

OPERATOR: Black Female (Eleanor)

VEHICLE # V-117

APPEARANCE: Neat and Clean

ON SCHEDULE: No

On March 18, 1981 I arrived at Tower Mall about 2:10 p.m. to catch a Maxi-Taxi to Deep Creek at the Gilmerton Shopping Center, about 3:00 p.m. or a little after a Deep Creek Maxi-Taxi came into Tower Mall, but stopped before he reached the pick-up point. He let off a passenger and one stayed on, he then made a U-turn and left the mall. The passenger that got off the van told us, that the driver was on his lunch break , and said the Bower's Hill Maxi-Taxi driver would come to Tower Mall and pick us up to take us to Deep Creek. She arrived about 3:30 p.m. One passenger was on the van, also the driver's two children, (a girl and boy). The children were eating pop corn and dropping it all over the van. The driver asked everyone where they were going and recorded it. There were six passengers on the van, but only one was going to Bowers Hill. The drivers son collected the fare and he and his sister fussed over the money. He gave her the dollar bills and he kept the change and the tickets until his mother asked for them. She put the fare in the outside pocket of her sweater, then she put the change and tickets in an inside pocket. The drivers name was Eleanor, she was black,neat and clean but not very courteous. The van number was #117 and it was dirty, with newspaper and pop corn on the floor, also a Burger King cup on the console.

L. Brown

MAXI-TAXI OPERATORS REPORT

ORIGIN: Great Bridge Shopping Center

DESTINATION: Chesapeake General Hospital

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Great Bridge - Greenbrier

OPERATOR: Black Female

VEHICLE # V-108

APPEARANCE: Clean

ON SCHEDULE: Yes

This driver collected the proper fare, also made fare change. She did not detour off her route, but she drove very fast. She was not at all courteous to the passengers.

The driver, dispatcher and a passenger got into an arguement over the radio The customer used very dirty language and was not asked to stop. The driver got angry with the passenger and turned the radio up very loud. There was a man riding up front with the driver and talked as if they were friends.

D. Whitehurst

MAXI-TAXI OPERATORS REPORT

ORIGIN: Norfolk General Hospital

DESTINATION: Hampton Blvd. to O.D.U.

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Hampton Blvd./Colonial Place Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-108

APPEARANCE: Neat

ON SCHEDULE: No

This taxi is scheduled to leave Norfolk General Hospital every 40 minutes starting at 7:00 p.m. The first taxi left there at 7:35 p.m. I feel that this taxi is a duplicate of two routes already in service. This taxi will take you anywhere down Hampton Blvd. you want to go, which duplicates Route #2 Naval Base. It also takes you down 38th Street to Powhatan Avenue which is only two blocks off of the Church Street Route.

M. Thompson

MAXI-TAXI OPERATORS REPORT

ORIGIN: Norfolk General Hospital

DESTINATION: 7/Eleven Store at corner of Hampton Blvd. and Lexan

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Hampton Blvd./Colonial Place Maxi-Taxi

OPERATOR: Black Female

VEHICLE # V-108

APPEARANCE: Neat

ON SCHEDULE: No

The driver of this taxi collected the proper fare and did not make fare change. She was very courteous to her passengers, also she didn't eat, drink, or smoke while driving the taxi. She did not detour off the route, she was a safe driver.

The driver recorded the addresses of where each passenger was going. She was a good driver. The van number was #108.

D. Whitehurst

MAXI-TAXI OPERATORS REPORT

ORIGIN: Tidewater Community College

DESTINATION: Churchland Shopping Center

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Portsmouth Night Service

OPERATOR: N/A

VEHICLE # N/A

APPEARANCE: N/A

ON SCHEDULE: NO (The van never showed up!)

I called from TCC for service at 7:20 p.m. The dispatcher said that the driver would be there but she did not know how long it would take. I stayed there until 8:30 p.m., and it had not shown up yet. There was another passenger waiting for Maxi-Taxi also. He said he called them at 6:30 p.m. and still no taxi. He called back three times while I was there waiting. I can understand why people are always complaining about the service. It stinks. I think the Maxi-Taxi service is a waste of time and TRT's money.

R. Rodman

MAXI-TAXI OPERATORS REPORT

ORIGIN: Portsmouth General Hospital

DESTINATION: Cavalier Manor

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Portsmouth Night Service

OPERATOR: N/A

VEHICLE # N/A

APPEARANCE: N/A

ON SCHEDULE: NO (The van never showed up!)

I called the dispatcher at 8:50 p.m. for a Maxi-Taxi to pick me up at Portsmouth General Hospital and asked how long it would be before it comes. The dispatcher said ½ hour or maybe longer or not at all because they were having problems with the radio and that she would have to wait for one of the drivers to call in.

Not being sure if I would be picked up I found another means of transportation, which I am sure anyone else in my place would have done the same thing. I would not advise anyone to take Maxi-Taxi service at night because it is not dependable at all. Being a woman and having to wait on this service is putting your life in danger because there are to many things that could happen if you did wait.

Your service needs to get its act together, or leave the business to someone who can!!

D. Helton

ORIGIN: Tower Mall

DESTINATION: Portsmouth Naval Hospital

DATE: March 18, 1981

DAY: Wednesday

ROUTE: Portsmouth Night Service

OPERATOR: N/A

VEHICLE # N/A

APPEARANCE: N/A

ON SCHEDULE: No (Van never showed up!)

On Wednesday, March 18, 1981, I was taken to Tower Mall to catch the Portsmouth Night service. I arrived about 7:05 p.m.. The Maxi-Taxi is due to leave Tower Mall every 30 minutes. I waited until 7:55 p.m., no Maxi-Taxi so I called and the dispatcher told me one was on its way. He was very rude to me, he hung the phone up while I was still talking. I continued to wait until 8:20 p.m. then I called back to see if it was coming, the same dispatcher answered and I asked for a Maxi-Taxi at Tower Mall, he called a driver and they said O.K. The dispatcher sounded intoxicated (he spoke quite loud and his speech was slurred). It was a very frustrating and upsetting experience. After all the phone conversations the van never came to pick me up!

L. Brown

MAXI-TAXI OPERATORS REPORT

ORIGIN: Tower Mall

DESTINATION: Cavalier Manor

DATE: March 25, 1981

DAY: Wednesday

ROUTE: Portsmouth Night Service

OPERATOR: Black Male

VEHICLE # N/A

APPEARANCE: Neat

ON SCHEDULE: NO

I called the Portsmouth night service at 7:30 p.m. but you are not suppose to have to call them because they are suppose to run every ½ hour. The taxi arrived at 8:40 p.m. where it picked up seven people with three already on, not including the driver and his lady friend. You didn't have to pay your money until you got off of the van. The young lady was the one that collected the money. We first went out to Ahoy Acres where a young man got off and then we headed for Cavalier Manor. I arrived home at 8:50 p.m. and the driver was then on his way to Deep Creek. If I could have found another way home I would have done so, I thought about walking but it was to dark. I feel that maybe these drivers have to much area to cover.

I am so glad that I do not have to depend on this service because one could get very disgusted with the long waiting period that you are faced with and then you have to ride all over, before reaching your destination. Something needs to be done, maybe shortening their distance or area. I couldn't get the van number because it was very dark and I just wanted to get home.

D. Helton

MAXI-TAXI OPERATORS REPORT

DATE: March 26, 1981

DAY: Thursday

WEATHER: Warm/Windy

ROUTE: Portsmouth Night Service Maxi-Taxi #1

BOARDED: (7:40 p.m.) Churchland Shopping Center

ALIGHTED: (8:10 p.m.) Maryview Hospital

VEHICLE # 110

OPERATOR: Chris (Male)

An analysis of this route was taken on Thursday, March 26, 1981. I waited at the Maxi-Taxi stop at Churchland Shopping Center from 7:00 p.m. until 7:30 p.m. Eventually, I went to phone for a Maxi-Taxi and one arrived four minutes later. The taxi operator followed the guidelines as indicated. He demonstrated a high degree of professionalism in operating the taxi.

Chris was given an overall grade of "Good" for his driving ability. He said that he had worked for Maxi-Taxi since it began service. Chris informed me along with four other passengers that we would have to transfer to another taxi at Maryview Hospital. (Reason: Zone territory).

We waited about five minutes at Maryview Hospital, before the taxi arrived. Two seperate reports are being done, because of the transfer service; please see report below:

DATE: March 26, 1981

DAY: Thursday

WEATHER: Warm/Windy

ROUTE: Portsmouth Night Service - Maxi-Taxi #2

BOARDED: (8:10 p.m.) Maryview Hospital

ALIGHTED: (8:30 p.m.) High Street and Crawford Parkway

VEHICLE # 108

OPERATOR: Female

This is a continuation of the first report. The operator was given an overall grade of "Good" for her driving ability. She demonstrated a high degree of professionalism in operating the Maxi-Taxi.

Ben McIntosh
Senior Transportation Surveyor

APPENDIX D

ON-BOARD SURVEY RESULTS

TIDEWATER REGIONAL TRANSIT

MAXI-RIDE RIDER SURVEY

TRT would like to know more about Maxi-Ride riders so that we can improve our services. Please answer the following questions about your trip. Thank you.

1. Have you ever used Maxi-Ride before this trip?

   _____ Yes _____ No

   If yes, how often? (Check one)

   ___ At least once per month.
   ___ At least four trips per month.
   ___ Two or three trips per week.
   ___ More than three trips per week.

2. Where are you coming from? (Check one)

   ___ Home
   ___ Work
   ___ School
   ___ Shopping
   ___ Personal visit or recreation/entertainment
   ___ Medical or Social Services visit
   ___ Other _____
   (Please specify)

3. Where is the place you are coming from?

   Name of place or building _____

   Address or nearest street intersection: _____

   _____

4. Where are you going? (Check one)

   ___ Home
   ___ Work
   ___ School
   ___ Shopping
   ___ Personal visit or recreation/entertainment
   ___ Medical or Social Services visit
   ___ Other _____
   (Please specify)

5. Where is the place you are going?

   Name of place or building: _____

   Address or nearest street intersection: _____

   _____

6. How did you make this trip before you used Maxi-Ride?

   ___ Did not make trip
   ___ Bus. What route? _____
   ___ Drove myself
   ___ Ride with someone else
   ___ Taxi
   ___ Walk
   ___ Other _____

7. How did you get Maxi-Ride before this trip?

   ___ Called dispatcher for service. At what time did you call in your request? _____

   At what time was Maxi-Ride suppose to pick you up? _____

   At what time were you picked up? _____

   ___ Got on at Maxi-Ride stop. How did you get to stop? ___ Walk ___ Bus ___ Car ___ Other
   How long did you wait? _____ minutes.

8. How will you get from Maxi-Ride to your final destination?

   ___ Maxi-Ride takes me exactly where Im going
   ___ Bus. What route? _____
   ___ Walk
   ___ Drove myself
   ___ Ride with someone else
   ___ Other _____
   (Please specify)

9. Was the dispatcher?

Yes	No	
___	___	Courteous?
___	___	Helpful?

10. Was the driver?

Yes	No	
___	___	Courteous?
___	___	Helpful?
___	___	Neat in appearance?

11. Was the Maxi-Ride?

Yes	No	
___	___	Clean?
___	___	Comfortable?
___	___	Convenient?

12. Do you have any comments or suggestions about Maxi-Ride service? _____

    _____

    _____

13. Are you a licensed driver? ___ Yes ___ No

14. How many cars, vans, or pick-up trucks does your household have available?

    ____ None ____ Two
    ____ One ____ Three or more.

15. Are you: ____ Male ____ Female

16. What is your age? ____ Under 16

    ____ 16 to 20 ____ 41 to 50
    ____ 21 to 30 ____ 51 to 64
    ____ 31 to 40 ____ 65 or over

17. Do you have any physical disabilities which make it difficult for you to walk?

    ____Yes ____ No

18. How did you first find out about Maxi-Ride? (Check one)

    ____ T.V.
    ____ Newspaper
    ____ Radio
    ____ from TRT
    ____ Saw a Maxi-Ride van
    ____ From someone else
    ____ Brochure delivered to your home
    ____ Brochure you picked up
    ____ Other _____
    (Please specify)

19. Are you employed?

    ____ Yes - Full-time ____ Yes - Part-time
    ____ No

20. What is the total yearly income of your household? (Check one)

    ___ Less than $5,000
    ____ $5,000 to $9,999
    ____ $10,000 to $14,999
    ____ $15,000 to $19,999
    ____ $20,000 to $24,999
    ____ $25,000 or more

TABLE 1

PRIOR USE OF MAXI-RIDE

LOCATION		Have you ever used Maxi-Ride before? YES	NO	How often? once a month	4 times a month	2 or 3 x. a week	over 3x a week
OVERALL	N	99	9	11	17	22	39
	%	92%	8%	12%	19%	25%	44%
BOWERS HILL	N	12	0	1	3	4	3
	%	100%	0	9%	27%	36%	27%
DEEP CREEK	N	28	0	2	4	8	11
	%	100%	0	8%	16%	32%	44%
WILLOU-GHBY	N	12	3	2	4	2	2
	%	80%	20%	20%	40%	20%	20%
HAMPTON BLVD	N	14	2	1	1	1	8
	%	88%	12%	9%	9%	9%	73%
OCEAN VIEW	N	14	3	5	4	4	3
	%	82%	18%	31%	25%	25%	19%
CHURCH-LAND	N	19	1	0	1	3	12
	%	95%	5%	0	6%	19%	75%

TABLE 2

TRIP PURPOSE

LOCATION		Where are you coming from? Home	Work	Sch.	Shop	P.V.[1]	Dr.[2]	Where are you going? Home	Work	Sch.	Shop	P.V.[1]	Dr.[2]
OVERALL	N	70	13	5	14	7	1	40	32	2	25	2	5
	%	64%	12%	5%	13%	6%	1%	38%	30%	2%	24%	2%	5%
BOWERS	N	4	2	0	2	2	1	7	1	0	1	1	0
HILL	%	36%	18%	0	18%	18%	9%	70%	10%	0	10%	10%	0
DEEP	N	22	2	1	1	0	0	4	14	1	5	0	2
CREEK	%	85%	8%	4%	4%	0	0	15%	54%	4%	19%	0	8%
WILLOU-	N	6	6	2	0	3	0	2	1	0	13	1	0
GHBY	%	35%	35%	12%	0	18%	0	12%	6%	0	76%	6%	0
HAMPTON	N	15	0	0	2	0	0	9	5	1	0	0	2
BLVD	%	88%	0	0	12%	0	0	53%	29%	6%	0	0	12%
OCEAN	N	8	2	0	7	2	0	11	3	0	4	0	0
VIEW	%	42%	11%	0	37%	11%	0	61%	17%	0	22%	0	0
CHURCH-	N	15	1	2	2	0	0	7	8	0	2	0	1
LAND	%	75%	5%	10%	10%	0	0	39%	44%	0	11%	0	6%

[1] P. V. - Personal visit or recreation/entertainment

[2] Dr. - Medical or social service visit.

TABLE 3

TRIP MODE

LOCATION		How did you make the trip before Maxi-Ride: didn't	bus	drove	rode	taxi	W.[1]	How will you get from Maxi-Ride to your destination: MR[2]	Bus	walk	drive	ride
OVERALL	N	10	49	13	15	6	5	54	28	16	0	5
	%	10%	50%	13%	15%	6%	5%	52%	27%	16%		5%
BOWERS HILL	N	1	7	1	3	0	0	3	4	3	0	0
	%	8%	58%	8%	25%			30%	40%	30%		
DEEP CREEK	N	2	11	4	6	0	1	10	9	3	0	4
	%	8%	46%	17%	25%		4%	38%	35%	12%		15%
WILLOU-GHBY	N	0	11	2	0	2	1	12	5	0	0	0
	%		69%	13%		13%	6%	71%	29%			
HAMPTON BLVD	N	1	13	1	1	1	0	11	1	5	0	0
	%	6%	76%	6%	6%	6%		69%	6%	29%		
OCEAN VIEW	N	2	7	2	3	1	2	7	2	3	0	1
	%	12%	41%	12%	18%	6%	12%	54%	15%	23%		8%
CHURCH-LAND	N	4	6	3	2	2	1	11	7	2	0	0
	%	22%	33%	17%	11%	11%	6%	55%	35%	10%		

[1] W - Walk

[2] MR - "Maxi-Ride takes me exactly where I'm going."

TABLE 4

TRANSIT DEPENDANCY

LOCATION		Are you a liscenced driver? YES	NO	How many cars do you have available 0	1	2	3+
OVERALL	N	39	67	48	34	8	3
	%	37%	63%	52%	37%	9%	3%
BOWERS HILL	N	3	8	8	3	0	0
	%	27%	73%	73%	27%		
DEEP CREEK	N	13	11	10	12	1	2
	%	54%	46%	40%	48%	4%	8%
WILLOU-GHBY	N	6	11	13	2	0	1
	%	35%	65%	81%	13%		6%
HAMPTON BLVD	N	10	7	5	5	2	0
	%	59%	41%	42%	42%	16%	
OCEAN VIEW	N	4	13	5	7	3	0
	%	24%	76%	33%	47%	20%	
CHURCH-LAND	N	3	17	12	5	2	0
	%	15%	85%	71%	29%	12%	

TABLE 5

DEMOGRAPHIC INFORMATION

LOCATION		Sex M	Sex F	AGE -16	16-20	21-30	31-40	41-50	51-64	64+	Disabilities Y	Disabilities N
OVERALL	N	19	80	0	17	34	7	14	20	16	21	89
	%	19%	81%		16%	31%	6%	13%	19%	15%	19%	81%
BOWERS HILL	N	2	9	0	1	2	1	0	4	4	2	10
	%	18%	82%		8%	17%	8%		33%	33%	17%	83%
DEEP CREEK	N	5	18	0	4	11	1	4	5	0	5	22
	%	22%	78%		16%	44%	4%	16%	20%		19%	81%
WILLOU-GHBY	N	1	16	0	3	5	2	0	4	2	4	13
	%	6%	94%		19%	31%	13%		25%	13%	24%	76%
HAMPTON BLVD	N	3	11	0	5	5	1	1	2	1	0	16
	%	21%	79%		36%	36%	7%	7%	13%	7		100%
OCEAN VIEW	N	3	12	0	2	6	2	3	2	4	7	11
	%	20%	80%		11%	32%	11%	16%	11%	21%	39%	61%
CHURCH-LAND	N	5	14	0	2	5	0	6	3	5	3	17
	%	26%	74%		10%	24%		29%	14%	24%	15%	85%

Table 6

MORE DEMOGRAPHIC INFORMATION

LOCATION		Employment status			Income					
		FT	PT	NO	-5	5-9	10-15	15-20	20-25	25+
OVERALL	N	46	24	41	30	19	13	7	4	0
	%	41%	22%	37%	41%	26%	18%	10%	5%	0
BOWERS HILL	N	4	1	7	2	5	1	0	0	0
	%	33%	8%	58%	25%	63%	13%			
DEEP CREEK	N	16	8	4	13	3	3	3	1	0
	%	57%	29%	14%	57%	13%	13%	13%	4%	
WILLOU-GHBY	N	5	2	9	6	4	1	0	0	0
	%	31%	13%	5%	55%	36%	9%			
HAMPTON BLVD	N	11	3	3	3	4	3	2	1	0
	%	65%	18%	18%	23%	31%	23%	15%	8%	
OCEAN VIEW	N	4	3	10	4	3	3	1	2	0
	%	24%	18%	59%	31%	23%	23%	8%	15%	
CHURCH-LAND	N	6	7	8	2	0	2	1	0	0
	%	29%	33%	38%	40%		40%	20%		

TABLE 7

SOURCE OF INFORMATION ABOUT MAXI-RIDE

LOCATION		TV	News-Paper	Radio	TRT	Saw Van	Someo. else	Broch. Deliv.	Broch. Picked-up
OVERALL	N	2	9	0	28	22	32	6	8
	%	2%	8%		26%	21%	30%	6%	7%
BOWERS HILL	N	0	0	0	7	3	0	1	1
	%				58%	25%		8%	8%
DEEP CREEK	N	0	5	0	6	4	10	4	1
	%		17%		20%	13%	33%	13%	3%
WILLOU-GHBY	N	0	0	0	1	2	10	0	2
	%				7%	13%	67%		13%
HAMPTON BLVD	N	0	0	0	5	7	3	0	1
	%				31%	44%	19%		6%
OCEAN VIEW	N	1	2	0	2	1	6	1	3
	%	6%	13%		13%	6%	38%	6%	19%
CHURCH-LAND	N	1	2	0	7	5	3	0	0
	%	6%	11%		39%	28%	17%		

TABLE 8

SATISFACTION WITH DRIVER/ VEHICLE/ DISPATCHER

LOCATION		Was dispatcher: Courteous Y	Courteous N	helpful Y	helpful N	Was Driver: Courteous Y	Courteous N	helpful Y	helpful N	neat Y	neat N	Was Vehicle: clean Y	clean N	comfortable Y	comfortable N	convenient Y	convenient N
OVERALL	N	92	2	68	3	93	2	76	3	72	1	92	10	86	0	81	2
	%	98%	2%	96%	4%	98%	2%	96%	3%	99%	1	90%	10%	100%		100%	
BOWERS HILL	N	9	1	6	1	11	0	8	1	6	-	11	0	8	0	4	0
	%	90%	10%	86%	14%	100%		88%	11%	100%		100%		100%		100%	
DEEP CREEK	N	26	1	19	1	24	1	19	0	18	0	23	1	20	0	19	1
	%	96%	4%	95%	5%	96%	4%	100%		100%		96%	4%	100%		95%	5%
WILLOUGHBY	N	12	0	10	0	14	0	12	0	9	0	15	1	14	0	13	0
	%	100%		100%		100%		100%		100%		94%	6%	100%		100%	
HAMPTON BLVD	N	16	0	10	0	17	0	12	0	13	0	16	1	16	0	16	1
	%	100%		100%		100%		100%		100%		94%	6%	100%		94%	6%
OCEAN VIEW	N	13	0	12	1	10	0	12	1	12	0	14	0	12	0	12	0
	%	100%		92%		100%		92%	8%	100%		100%		100%		100%	
CHURCHLAND	N	16	0	11	0	17	1	13	1	14	1	13	7	16	0	17	0
	%	100%		100%		94%	6%	93%	7%	93%		65%	35%	100%		100%	

TABLE

DIFFERENCE BETWEEN TIME PROMISED AND TIME PICKED-UP

LOCATION		TOTAL	N	AVERAGE
OVERALL	N %	305 minutes	43	7.1 minutes
BOWERS HILL	N %	25	4	6.25
DEEP CREEK	N %	132	14	9.4
WILLOU-GHBY	N %	52	5	10.4
HAMPTON BLVD	N %	35	7	5.0
OCEAN VIEW	N %	40	7	5.7
CHURCH-LAND	N %	21	6	3.5

	FROM	TO
BOWERS HILL AND DEEP CREEK ROUTES		
TOWER MALL	6	7
CAMELOT	5	2
SUNSET MANOR	0	3
GENEVA COURT	2	2
BROADMOOR	2	1
DEEP CREEK	4	0
OTHER	10	3
TOTAL	29	18
CHURCHLAND		
BELLEVILLE	3	1
HUNTERSVILLE	2	1
PUGHSVILLE	1	1
CHURCHLAND S.S.	1	2
OTHER	9	7
TOTAL	16	12
HAMPTON BLVD.		
NORFOLK GEN.	2	5
ODU	1	1
OLD DOMINION PL.	5	5
OTHER	9	2
TOTAL	17	13
OCEAN VIEW AND WILLOUGHBY		
WARDS CORNER	1	9
SOUTHERN SH. C.	2	0
OCEAN VIEW AVE	4	1
COTTAGE PARK	5	2
BRADLEES	2	1
SEWELLS PT. RD	3	2
OTHER	15	14
TOTAL	32	29

COMMENTS/SUGGESTIONS
(Verbatum)

Bowers Hill

-none

Deep Creek

-Improve service and cut costs.
-I couldn't make it to work without it.
-It's a great help to work. No people and shoppers.
-Some times I'm late for work if it's busy.
-good
-Nicest thing that could happen for the people.
-Nice to have Maxi-Ride.
-Very nice
-Good service.
-I can't get to work without it.
-That is very great and I hope they keep with their job.
-I would use the Maxi-Ride here often if the service wasn't stretched so thin.

Churchland

-Service after 6 p.m. to downtown Portsmouth should be continued.
-I like it.

Ocean View

-To be able to crack the windows open.
-I find it helpful.
-Needs another van on this route.
-More Maxi's needed as riders are increasing rapidly.
-Bring back night hours.
-Have always had nice trip.
-There is a big need for another evening Maxi bus. My main complaint is in the evening. When I wait for the Maxi to take me home from Wards Corner I call in at work at 4 p.m. to be picked up at 6 p.m. and driver is too busy up in Willoughby at that time. They need another Maxi in the evening after 5 p.m. Many people need Maxi since TRT took off Willoughby and Bayview buses.

Willoughby

-Would be possible to be picked up sooner if there were more vans. Sometimes I wait an hour. I take Maxi-Taxi in the evenings from Wards Corner to Bayview. I call before 5 p.m. and ask the Van to be there at 6 p.m. Sometimes I wait an hour or so.
-Good service.
-Very good.

-Very good.
-Good service.
-Good service.

Hampton Blvd.

-Didn't have bus schedule. Very convenient. It's a great idea.
-We need more.
-You need to keep them going.
-Be on time for pickup.
-Excellent.
-Some late arrivals, but not often.

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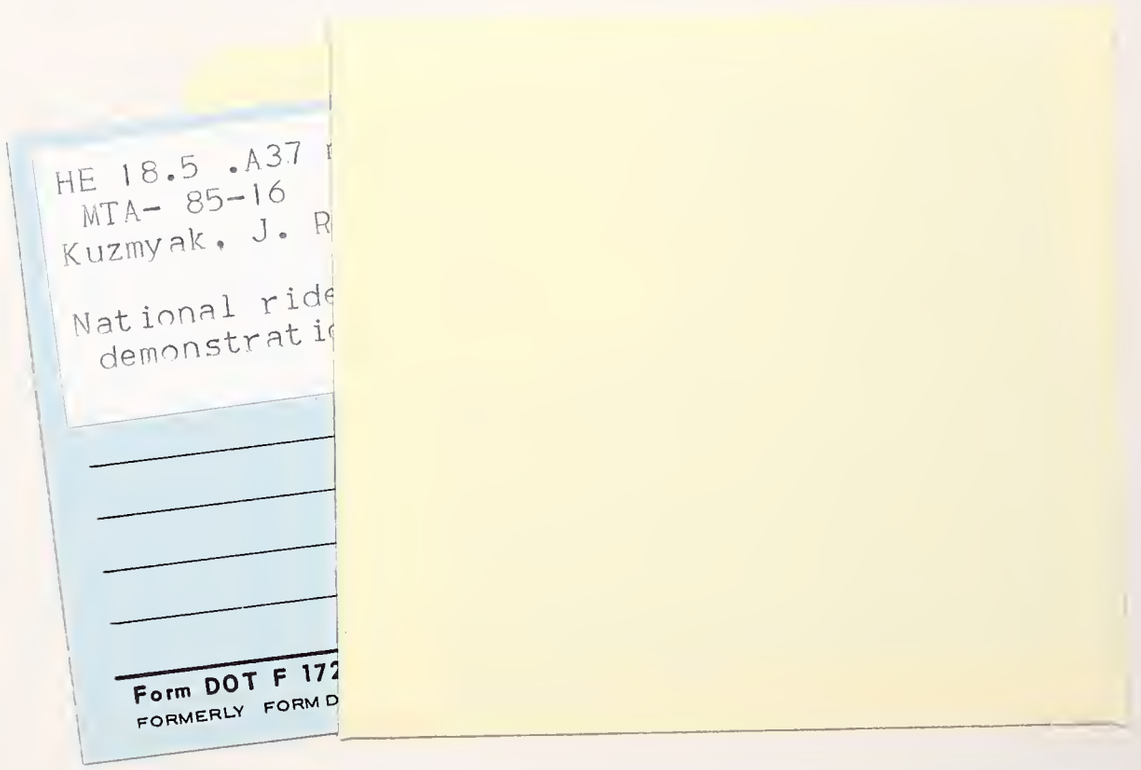
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